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FIRE ENGINEERING

The Journal of the Fire Protection Profession Since 1877

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DECEMBER, 1943

Vol. 96, No. 12

Brush Fire Envelops Mountain in California

A CASE - SHEPPERD - MANN PUBLICATION

Protecting America From Asphyxial Death

Throughout this country and with the armed forces overseas, the . . . . . .

EMERSON RESUSCITATOR

is preventing unnecessary loss of life from drowning, smoke or gas suffocation, electric shock or other asphyxia. In this manner, it is making an important contribution to our conservation of manpower.

Your community should have the three-way protection it gives. Write for literature or a demonstration.

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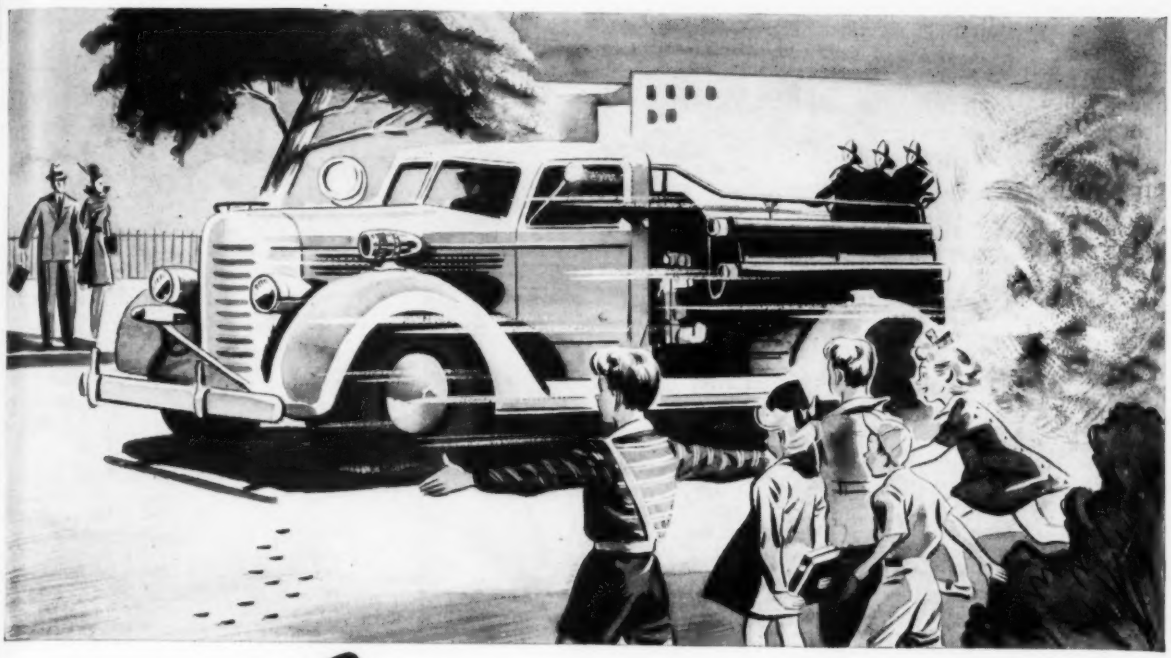
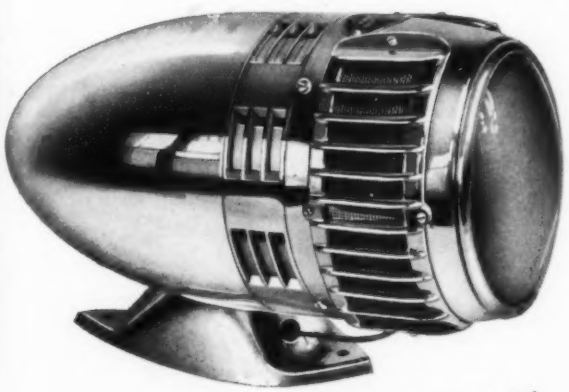


ADD *Maximum* SAFETY with FEDERAL SIRENS



The FEDERAL FURY EXHAUST WHISTLE is available as a warning signal in those communities which still prohibit the use of sirens under wartime conditions. Two new models of oscillating lights are also available for additional protection by a visual warning.

The unmistakable warning tone—up and down the scale—of FEDERAL Sirens assures maximum safety to pedestrians and vehicles, including your own.

FEDERAL Sirens are powerful—their tone, reaching far ahead, gives ample warning to avoid confusion that so often results in near-panic and accidents. In addition FEDERAL Sirens can be furnished with flashing red light or oscillating red light, giving visible as well as audible warning.

These sirens, made in a variety of models, are designed and constructed for long, dependable service.

WRITE FOR BULLETIN TODAY!

FEDERAL ELECTRIC CO., Inc.

SIREN HEADQUARTERS

8702 So. State Street Chicago 19, Illinois

FIRE ENGINEERING

A Consolidation of Fire and Water Engineering, The Fire Engineer and Fire Protection

CONTENTS

Vol. 96 December, 1943 No. 12

	Page
With the Editor By Fred Shepperd	753
Forest and Brush Fires Sweep Southern California By Bob Greenock	754
Florida State Fire College Holds Successful Meeting	756
Chief William Taubert Honored on Thirtieth Year in Service By John Wood	757
Novel Salvage Equipment for Reducing Heavy Water Damage	758
Practical Training for Auxiliary Firemen By Fred Shepperd	761
Questions and Answers	766
The Watch Desk	767
The Round Table Permitting Private Employment When Men Are Off Duty	768
Manufacturers' Announcements	774
False Alarms	776
What's Burning	779
Correspondence	782
Warfare	784
The Book Shelf	788

FRED SHEPPERD
Editor

"Never Too Old"

WE are always cheered by the fine lot of appreciative letters we receive from our readers, indicating that FIRE ENGINEERING must be doing a useful job.

● Here's one from an Army Air Base, "Somewhere in Florida," received in time to serve as sort of a holiday greeting to us:

Dear Mr. Shepperd:

Your editorial in October issue should be very convincing to certain Army officials who pay little attention to recommendations of Fire Chiefs who have a grave responsibility in the protection of lives on passenger and mail planes landing on their Air Base.

I want you to know that I do appreciate that editorial, altho a little late in acknowledging same on account of much activity here for the past few weeks.

Your last issue was very interesting from cover to cover—as it always is; no matter how busy I am, your magazine comes first—why?—well, after reading it, I may change my mind or put into effect some idea that was picked up during its reading, for no matter how old we are in this business, we can always learn something new.

Thanking you again for the editorial, I am

Respectfully,
L. C. Moore,
Fire Chief, Army Air Base

● Thank you, Chief Moore; and to you and to every other reader of FIRE ENGINEERING — we send our warmest greetings.

Merry Christmas!

The Publishers

FIRE ENGINEERING

The Journal of the Fire Profession since 1877; published on the fifteenth of each month by Case-Shepperd-Mann Publishing Corp., 24 West 40th St., New York 18, N. Y., also publishers of *Water Works Engineering, Sewage Works Engineering*, etc. ¶Subscription price U. S. and Latin America, $2 a year; Canada, $2.50; Foreign, $3; Single copies, 25c. ¶Member of Audit Bureau of Circulations and Associated Business Papers, Inc. ¶Entered as second-class matter April 15, 1929, at the Post Office at New York, N. Y., under Act of March 3, 1879. ¶Contents of this issue copyrighted, 1943, by Case-Shepperd-Mann Publishing Corp. ¶KARL M. MANN, President; I. HERBERT CASE, Vice-President and General Manager; FRED SHEPPERD, Secretary and Editorial Director; W. J. GIBSON, Eastern Representative; WM. H. TOPHAM, Circulation Manager. CHICAGO OFFICE: W. S. CLEVENGER and L. M. ROCHE, 6 No. Michigan Ave., Chicago 2, Ill.; SAN FRANCISCO: CHARLES H. WOOLLEY, 605 Market Street, San Francisco 5, Calif.; LOS ANGELES: AUGUST HAURIN, 6000 Miramonte Blvd., Los Angeles 1, Calif. ¶Printed in U. S. A.

A CASE-SHEPPERD-MANN PUBLICATION
"*Specialized* Leadership"

NEW WELDED STEEL HEAD!

"ANOTHER FAMOUS DUO-SAFETY PRODUCT!"

— Adopted by leading fire departments.

"HE-MAN PIKE POLE!"

HERE'S A REAL TOUGH ONE!

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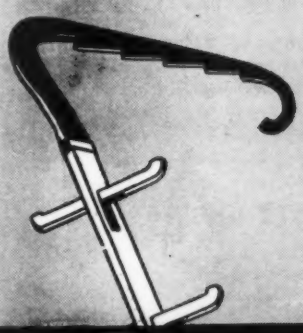
The Duo-Safety Pike Pole is a sturdy piece of equipment. The slotted ferrule shanks are welded to a prong and hook forging to make a light, exceedingly strong head. Poles are riveted into the ferrule shanks of the head. Try one and you'll never go back to the puny old style head.

A: Hardened steel inner plate.
B: Outside plates are high carbon steel.
C: Outside plates welded to center section and riveted to shaft.
D: Slotted shank riveted to shaft.
E: Slot in ferrule shank insures solid fit.

DETAIL of New Welded Steel Head



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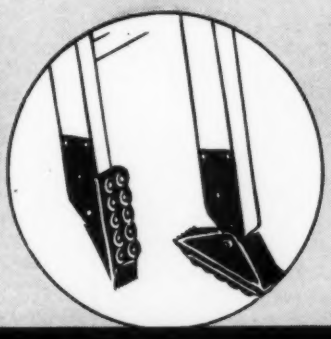
POMPIERS and Safety SHOES



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18,500 lbs. of Cure

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(About Model 150-T illustrated)

- Length: 25 feet 3 inches.
- Weight (empty): 15,000 lbs.
- Wheelbase: 192 inches.
- Turning Radius: 35 feet.
- Horsepower: 235.
- Pump: 1000 g.p.m., 2-stage Centrifugal, Rotary, optional.
- Booster Tank: 150-350 gallons.
- Hose Capacity: 450 feet ¾ inch Hose; 300 feet 1 inch Hose.

WE AGREE that in the fire field an ounce of prevention is worth a pound of cure. Pictured above, however, is the most effective nine and one-quarter tons of cure available to fire fighters. It is a model 150-T Ward LaFrance triple combination pumper recently delivered to the City of Minneapolis.

There is a Ward LaFrance pumper to meet the exact needs of any community. Let Ward LaFrance engineers help you to attain maximum protection for your community.

WARD LAFRANCE TRUCK DIVISION

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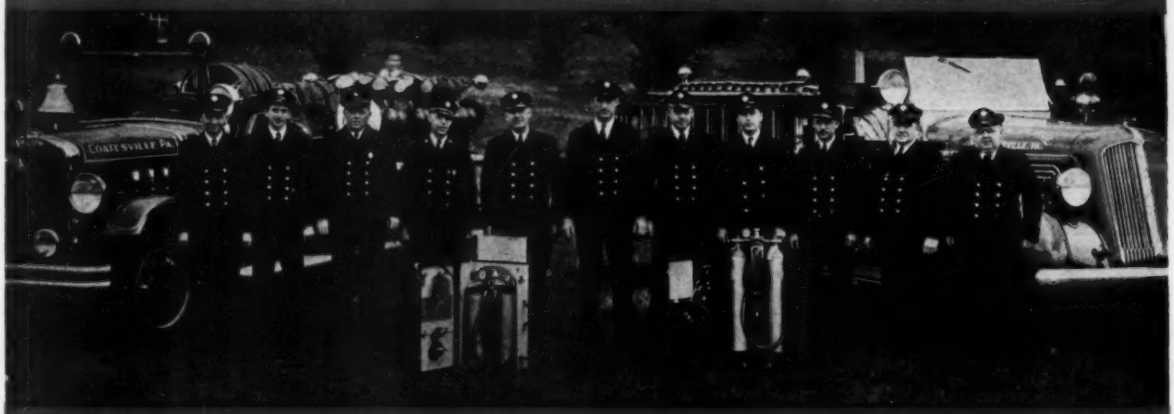


COATESVILLE, PA., knows from long experience that it pays to buy the best . . . . . .

The **E & J**

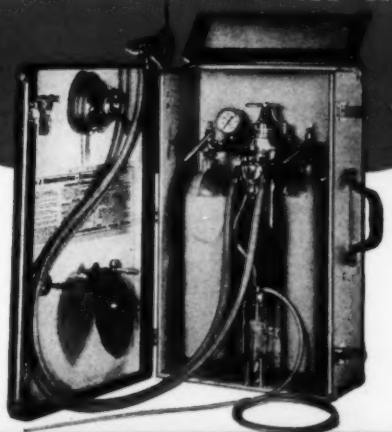
RESUSCITATOR INHALATOR and ASPIRATOR

FIRST CHOICE IN FIRST AID

IT means something for any piece of mechanical equipment to give ten continuous years of satisfactory service. But it means a whale of a lot more when this same equipment goes through that whole period without giving any mechanical trouble whatever. Well, that's the record of an E & J Resuscitator at Coatesville, Pa.—one used since 1933 by the Washington Hose Company (at right in above photo). This machine, which is still in regular service, not only has functioned perfectly but is credited with having saved many lives.

As a result of this remarkable experience, the Washington Company has just added an E & J Resuscitator, Inhalator and Aspirator of the latest type—and the West End Fire Company (at left in above photo) has done likewise.

The unfailing dependability of E & J automatic breathing machines is far from being a matter of luck. It is the result of sound engineering practice and precision workmanship, coupled with our many years of specialized experience in mechanical artificial respiration.



★ *Write to any of our distributors listed below for further information.* ★

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Fire Chiefs all over the world know that Seagrave will never let them down. . . . They have seen Seagrave Apparatus meet every test and definitely prove why it is called "The Greatest Name in Fire Apparatus." . . . That's because every piece of Seagrave Apparatus is engineered and built exclusively for fire service and for no other purpose. . . . That's why you are always safe with Seagrave.

THE SEAGRAVE CORPORATION, Columbus, Ohio
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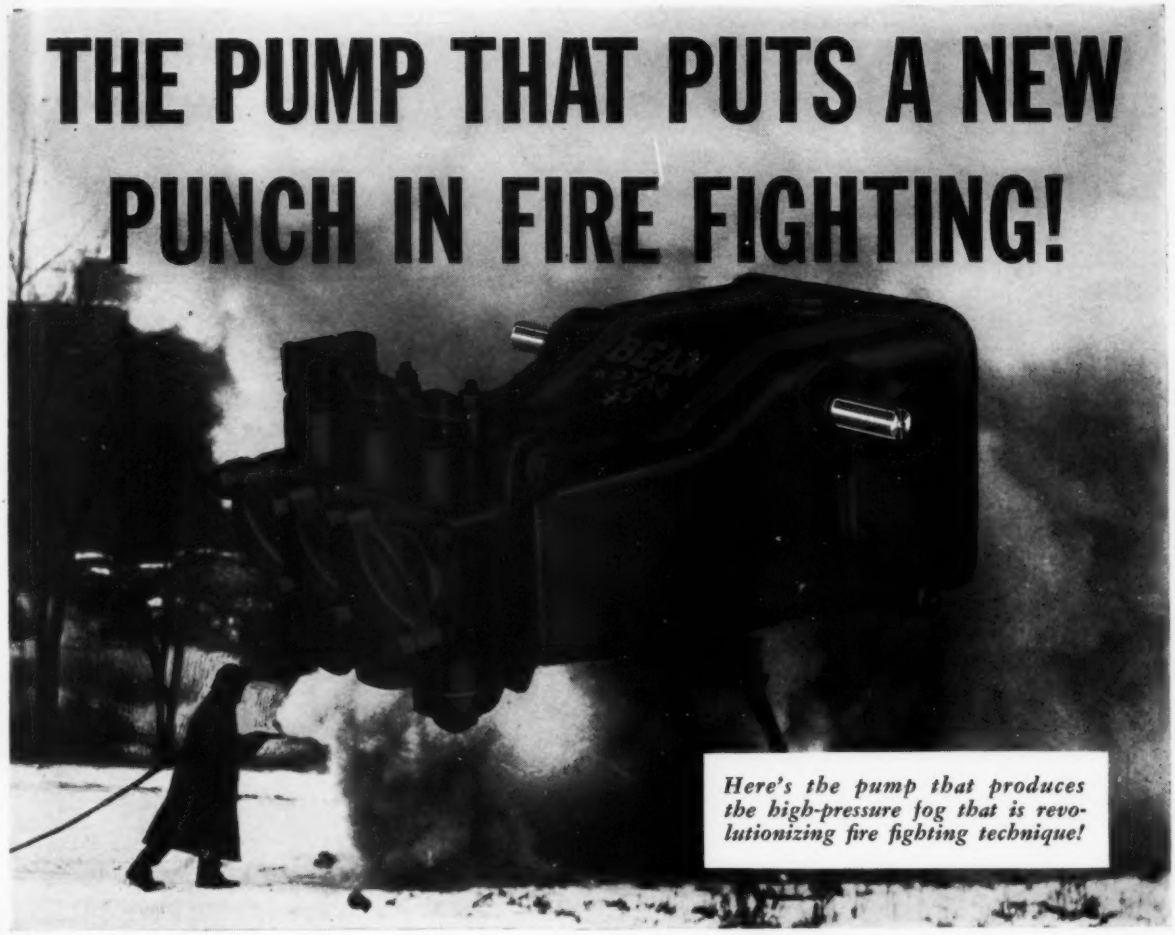
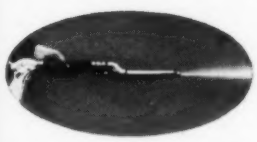
THE PUMP THAT PUTS A NEW PUNCH IN FIRE FIGHTING!



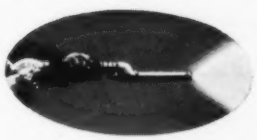
Here's the pump that produces the high-pressure fog that is revolutionizing fire fighting technique!

Delivers 600 lb. Pressure Fog at the Nozzle!



ONE MAN *handles Fog Fire Gun and hose. Stream can be adjusted with one hand.*

Efficient for use with 600 lb. or more nozzle pressure only.



FOG FIRE GUN *graduates from straight "power" stream to close-up fog.*

This 3 cylinder, all enclosed, oil bath, plunger type pump is the "heart" of the FMC Fog Fire Fighter. And what a fighting heart it is! Pumps 60 gallons of water a minute; built for much higher pressures it easily gives 600 lb. nozzle pressure (800 lbs. at pump) without overworking. Breaks up water so fine that one gallon properly used has the fire quenching possibilities of 35 low-pressure gallons. Makes fog that puts out fires faster with no water damage and no water shortage.

Don't confuse FMC High-Pressure Fog with *any other system.* There's nothing else like it for speed, for efficiency, for all-type fire protection. Proved on hundreds of fires all over the country. Get details from John Bean Mfg. Co., Lansing, Mich., or Bean-Cutler Division, Food Machinery Corporation, San Jose, Calif.

FMC FOG FIRE FIGHTERS *are low cost units. Carry own water and equipment. Several models.*

FMC *Original* FOG FIRE FIGHTER

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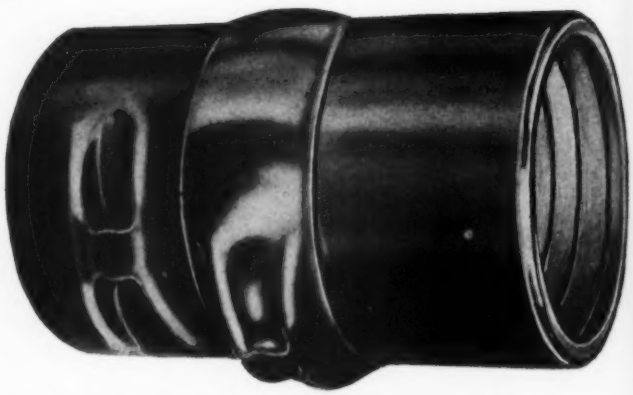
Play Safe!



Protect Men and Equipment with "KLEERLINE" COUPLINGS

WHAT a satisfaction to know that your hose lines will be clear, easily moved and safe from obstructions from the time they leave the chute until they are repacked, snug and compact on the truck.

What a relief to know that there are no lugs to snag, drag, catch, delay or injure personnel and still know that life and property loss will be materially reduced, through the unhampered speed of "KLEERLINE" couplings. Increase the morale of your department through the use of these safe, fast and scientifically designed couplings.

Play safe—equip your hose with "KLEERLINE" couplings. Start today to replace all your obsolete couplings with this new modern coupling. Demand them on all new hose. The same spanner designed especially for "KLEERLINE" coupling will fit any other coupling you may have on your truck.

Demand "KLEERLINE" coupling for economy, speed and safety!

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Mack

FIRE APPARATUS

If your community needs additional fire-fighting equipment or replacements, think of Mack. Remember, Mack Fire Apparatus is backed by the greatest engineering resources in the industry.

IF YOU'VE GOT A MACK, YOU'RE LUCKY . . . IF YOU PLAN TO GET ONE, YOU'RE WISE!

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MACK MANUFACTURING CORPORATION, FIRE ENGINE DIVISION
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Manufacturers
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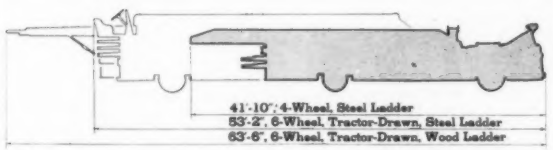
A 100-foot aerial on a 41-foot 10-inch truck

by AMERICAN-LAFRANCE*

A four-wheel aerial truck that requires no more space than a standard city service truck. These cab-over-engine aerials fit your station without adding "dog-houses" at the rear or requiring expensive remodeling.

Designed to provide the utmost in utility and performance, with safety and ease of operation, it combines every desirable feature found in the 6-wheel tractor drawn aerial plus the exclusive features of the 4-wheel cab-over-engine type. It's an aid to your man-power problem.



Comparative overall lengths of 3 aerial ladder trucks—all equipped with an 85-foot aerial ladder. No wonder Fire Departments are specifying American-LaFrance 4-wheel aerials.

- All steel aerial ladder
- Complete hydraulic power control for every ladder movement
- Quicker acceleration
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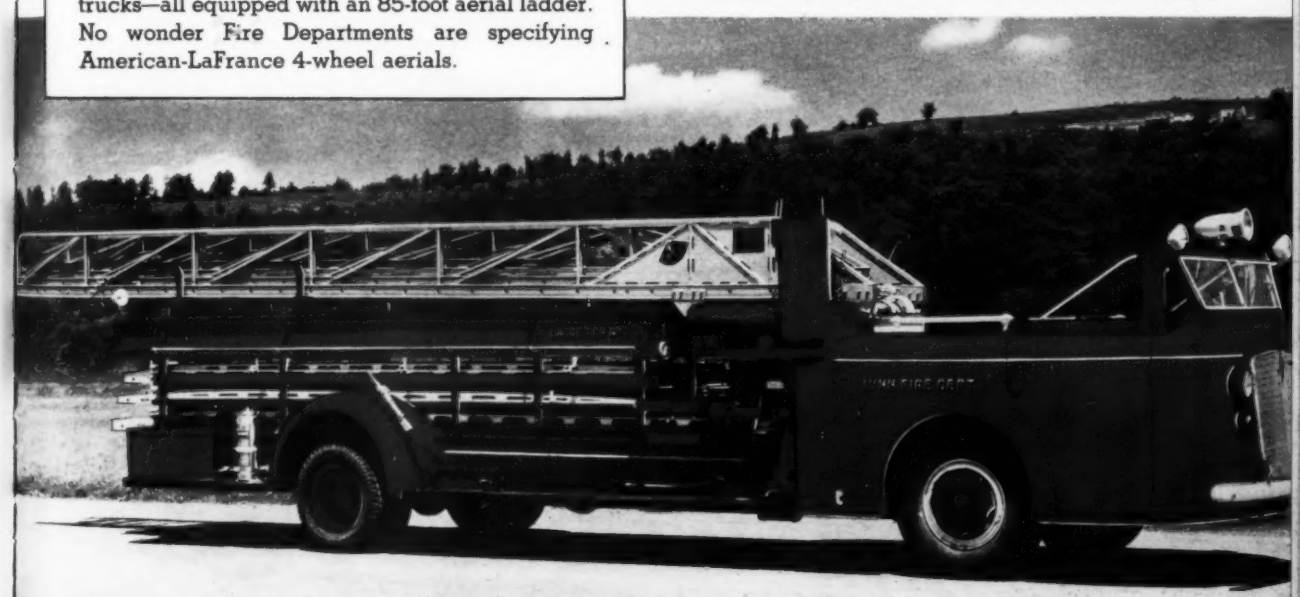
- Powered with the 200 B.H.P. V-12 engine
- Available with 65'-75' or 85' all steel aerial ladder



MODEL 4-100

* LAFRANCE-FOAMITE in Canada

AMERICAN-LAFRANCE-FOAMITE CORPORATION

ELMIRA, NEW YORK, U. S. A.

LAFRANCE FIRE ENGINE—FOAMITE LIMITED

Rewards for MINDS AT WORK

At the International Municipal Signal Association War Conference held in Cleveland during September 1943, the Hudson American Corporation offered the following prizes for the best answers to this question:

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Herbert A. Friede
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Special Award
$100 WAR BOND
to
Alfred Theurich
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145 East Holly Street,
Pasadena, Calif.

Two reasons prompted this contest: (1) the fact that our technical staff — devoted 100% to the task of providing products to win the war — cannot spare time for post-war planning now; (2) our belief that there is no better informed group from whom we can secure ideas as to needed electronic improvements in the field of municipal signaling than from *you*, the readers of this publication. The answers we have received have confirmed the wisdom of this decision. *Details of winning entries appear elsewhere in this issue.*

To all entrants, thanks for helping us to shape the products that will appear in the municipal systems of the City of Tomorrow.

3480

Hudson American
CORPORATION
Manufacturers of Electronic and Radio Devices
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BUY BONDS TODAY FOR VICTORY TOMORROW

FIRE CHIEFS WANT

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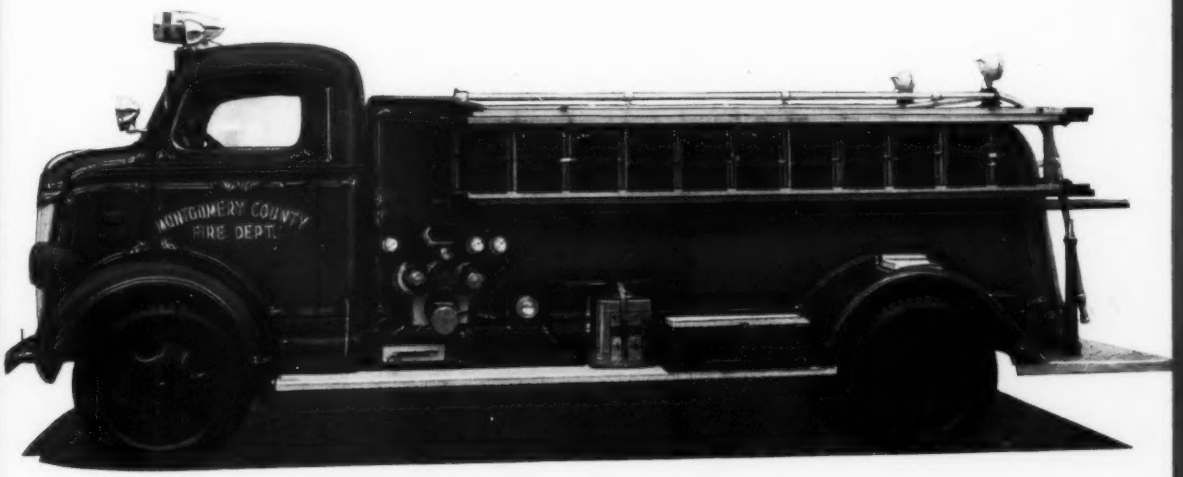
Because it is Dependable, Modern, Efficient



One of the triple combination units recently built and delivered to Montgomery County, Virginia.

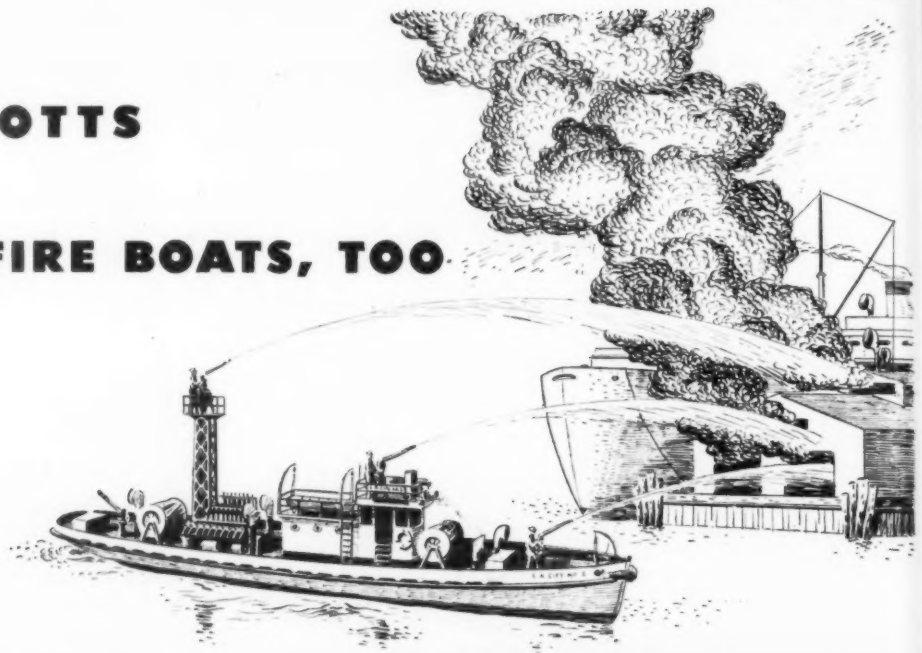
★ OREN can furnish a complete line of fire trucks in all types and sizes. Write for full information. ★

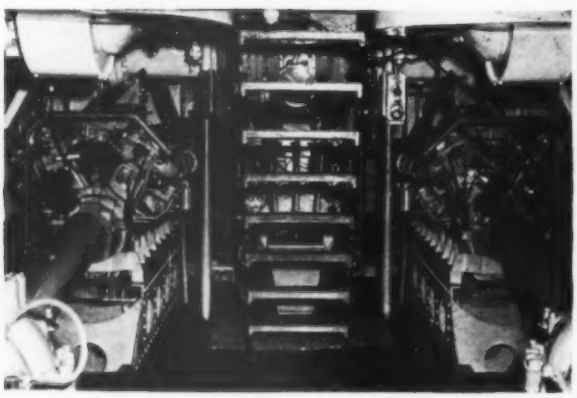
OREN FIRE APPARATUS COMPANY

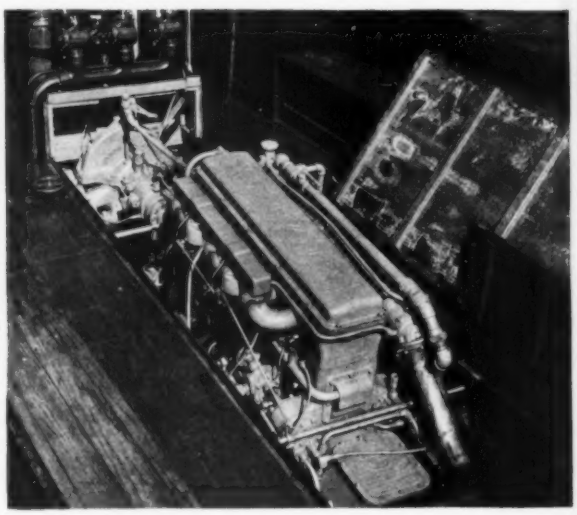
ROANOKE, VIRGINIA

HALL-SCOTTS

POWER FIRE BOATS, TOO







In addition to the wide use of Hall-Scott engines to power and repower fire trucks, larger Hall-Scott engines are used to power fire boats. Where power units of the order of 600 horsepower are desired, the Hall-Scott V-12 DEFENDER engine is ideally suited. Where power units of about 250 horsepower will suffice, the 6-cylinder Hall-Scott INVADER gives excellent service.

The 99′ Los Angeles Fire Boat II has two Hall-Scott DEFENDERS for its propulsion. These give it a speed of 14.75 m.p.h. with the Hall-Scotts operating at 1600 r.p.m. They also operate the pumps, delivering 1700 gallons per minute at 120 lb. pressure. They handle the pump load with practically no throttle opening. This boat has a high degree of maneuverability, and can be brought from full throttle to a complete stop within three lengths. The smaller Los Angeles Fire Boat No. III makes 22 m.p.h. with a single Hall-Scott INVADER.

All Hall-Scott engines for fire department use will deliver their full horsepower hour after hour, if necessary. When servicing is needed, their unit-assembly design allows any given unit to be quickly removed, a spare installed, and the apparatus returned to duty while repairs are made at the bench. For excellent performance and low maintenance — choose Hall-Scotts.

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to the FIRE CHIEF

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Fill Out, Clip and Mail to

AKRON BRASS MFG. COMPANY, INC.
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AKRON BRASS MFG. COMPANY, INC.
Wooster, Ohio

Gentlemen:
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Number of fire stations_____ Number of men_____

FIRE HOSE		FIRE TRUCKS			
Size	Footage	Type	Gal. Cap.	Size	No.

SHUT-OFF NOZZLES		MIST NOZZLES		DELUGE NOZZLES	
Size	Quantity	Size	Quantity	Size	Quantity

Improvement suggestions and remarks _____

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City_____ State_____

If you need additional coupons please write us

What then?

Inadequate fire defense is indicated when a citizen must traverse a greater distance to send an alarm than is required by the recognized standard of box distribution.

ECONOMY, implying the elimination of waste, especially Fire Waste, to the end that the cost of winning the war may be quickly amortized—or a continuation of the ineptitude in planning which in the 21 peacetime years, 1919-1939, imposed a national burden of 8½ billions of dollars in direct property losses, three times that amount in indirect losses, and more than 200,000 human lives?

Continuation of such losses will add heavily to the burden of reconstruction and delay in planning to strengthen your fire defenses may seriously handicap your efforts to reduce fire losses. Your plans should not only be adequate—to be effective they must be included in the municipal program of post-war improvements.

Fire alarm, a vitally essential factor in the fire defenses is our specialty, and our experience in this field accumulated over a period of 75 years is freely at the disposal of every Fire Chief.

THE GAMEWELL COMPANY
Newton Upper Falls, Massachusetts

FIRE ENGINEERING

DECEMBER, 1943 VOL. 96. NO. 12

With the Editor

OCD-Navy Cooperation

An important forward step in the development of better cooperative working conditions between the Navy Department, Bureau of Ships, civilian defense and municipal fire services, has been taken through the inauguration of a comprehensive mutual aid program, entered into by the Bureau of Ships, Navy Department and the United States Office of Civilian Defense. The program has the endorsement of not only these agencies, but also the International Association of Fire Chiefs, which approved this cooperation by special resolution of the Board of Directors early this year; the National Board of Fire Underwriters, the National Fire Protection Association and the International Association of Fire Fighters.

Furtherance of the program was hastened by the October marine disaster off the Florida coast with a loss of eighty-eight lives and precious cargoes, essential to the war effort, and the imminence of similar disasters.

The initial step in the program calls for the gathering and collating of basic essential data on certain special fire fighting materials, equipment and apparatus as well as communications systems, in the hands of municipal and private plant fire forces. When assembled, this information will be incorporated in a comprehensive working arrangement by means of which assistance wanted by naval forces may be quickly located and dispatched to the scene of any emergency.

Fire chiefs in the areas along the continental coast and navigable waters of the nation are being sent questionnaire forms through the Regional Offices of Civilian Defense and State Fire Coordinators and Fire Marshals. They are asked to fill out these questionnaires and return them with all possible dispatch.

Fire Resistant Lumber Next?

The Committee on Wood Utilization of the U. S. Department of Commerce estimates that, at an added cost of only two per cent, all vulnerable parts of a new home can be protected with lumber which has been chemically treated to make it fire resistant.

As there are on the market at the present time several different liquids which can be used for this purpose, and several companies making such liquids, no legal obstacles remain in the way of municipalities which might wish to adopt ordinances or building codes requiring the use of treated lumber in certain buildings or in certain areas of cities.

The abolition of the wood shingle roof in fire zones of cities materially reduced the danger of exposure fires and conflagrations.

The adoption of treated lumber for vulnerable parts of wood-constructed buildings, at least in the closely built-up sections of cities, should prove equally effective in checking the spread of fires.

Possibly the next logical step toward making cities fire resistant will be the enactment of legislation requiring the general use of treated lumber in municipal fire zones. It would be a worthwhile post-war accomplishment.

Merry Christmas!

No trumpet-blast profaned
The hour in which the Prince
of Peace was born;
No bloody streamlet stained
Earth's silver rivers on that
sacred morn.
—William Cullen Bryant

This Christmas season may stand alone in the history of this globe as the one marked by the greatest of bloodshed. Not a single major country remains out of the world-wide fray.

Though we are placing our sacrifice on the altar of liberty, our homes and families still remain free from the horrors of war; still free from the heel of the invader. Let up hope that these blessings will continue to be ours.

And as the end of the year approaches, may we extend to our readers our heartiest wishes for a Christmas of peace and security, to be followed by a year of health and prosperity.

Fred Oberfell

Forest and Brush Fires Sweep Southern California

By BOB GREENOCK

NOVEMBER saw scores of forest and brush fires sweep Southern California with devastating results which included millions of dollars worth of damage to homes, forests and grazing lands.

Thousands of acres in Los Angeles, Riverside, Orange and San Diego Counties were blackened as flames not only attacked inland sections but struck along the 160-mile front from the famed movie colony of Malibu to the Mexican border. There were four major fire fronts: in the Santa Monica Mountains, the Newhall area, the San Jacinto Mountains and in San Diego County.

As this is written there is no complete tabulation of the damage done, the number of acres burned, the homes and other property destroyed available but the scope of the sweep of flames in the Southern California tinderbox is shown by a report from San Diego County that more than twenty separate major fires raged at one time.

Fire Fighters in the Santa Monica Mountains Bordering Los Angeles Watch Backfire Started by Them and Pray It Will Stop Flames from Reaching Palatial Malibu Beach Movie Colony Homes. It Did

Fires Believed Incendiary

All the fires started within a matter of hours of one another and Los Angeles County Fire Warden Spence D. Turner blamed arsonists for at least some of the three score forest and brush fires. If arsonsists or saboteurs set any of the fires, they chose their time well for November is usually one of the dryest months and immediately precedes the rainy season. At the same time high winds are not infrequent at this time of the year and during the recent series of fires galelike winds propelled 100-foot flames through the brush and forest lands of a great part of the Southern California watershed.

Hundreds of residents were forced to flee to safety without being able to save valuables as city and county firemen, State and U. S. Forestry crews, soldiers and civilian fire fighters battled the flames. Although no actual loss of life was reported, many persons narrowly escaped death in the flames, many were injured directly or indirectly by the fires and a number were missing although believed to be safe.

Fire Fighting Personnel Numerous

At Malibu Beach and in other Los Angeles County districts many palatial homes were threatened. Flames racing through the Topanga Canyon district leveled at least 80 homes. More than 1000 personnel joined with trained forestry crews in fighting the blazes which raced to the Coast Highway and roared up several small inland canyons.

Soldiers, sailors and marines combatted the widely spreading fire and on several occasions gave home owners just three minutes to evacuate so close did the fire press.

At one point a desperate gamble turned back the flames almost under the eaves of palatial homes owned by movie stars at Malibu Beach when soldiers and civilian fire fighters daringly ran through the brush dropping flaming torches to

Ironical Indeed Is the Sign Which Says "Crater Lake . . . Delightful and Cool Malibu Canyon . . ."

Note fire fighters have hard time combatting blistering heat as flames shoot many feet into the air. Firemen in right background are manning a booster line. Flames were so hot men handling lines had to be relieved every few minutes.

start backfires. Workers saved the $200,000 showplace home of film star Richard Dix and the luxurious homes of Paulette Goddard and George O'Brien in Decker Canyon.

State Highway patrolmen reported leading a procession of 500 cars along the highway bordering the ocean when smoke from the blazes enveloped the road which winds around following the contour of the coast, often with sheer drops of several hundred feet to the foaming sea and jagged rocks below.

Blaze Most Disastrous Since 1938

Red Cross first aid units rushed to the scene of the most disastrous blaze of its kind since 1938 and treated many fire fighters for minor hurts. Sheriff's men and other police were thrown into the area to halt reported looting. Airplanes from the Coast Patrol flew constantly over the area relaying information to forestry headquarters.

The Army asked civilians to report any suspicious persons seen in areas where fires were burning and civil authorities said they were investigating possible incendiarism.

A heavy pall of smoke lay over the entire area although winds blew hard at times.

At Rancho Santa Fe, 35 miles from San Diego, flames burned over parts of Bing Crosby's ranch, leveled two homes and forced residents of the outlying districts to leave their homes on short notice by Army troops. The crooner suffered large fire loss to his suburban Los Angeles home earlier this year when fire started from crossed wires.

Service men, sheriff's deputies and forestry crews battled other fires in San Diego County at Delzura, Santa Ysabel and Jamacha, and as fast as one fire was brought under control men were shifted to the scene of fresh outbreaks.

At Newhall, approximately 35 miles northeast of Los Angeles, a brush fire started when an oil line burst. The fire quickly raged out of control and it was feared that the Los Angeles County Olive View Sanitarium, which lay in the path of the flames, would be destroyed. Herculean efforts of forestry crew and volunteers managed to divert the flames and eventually the sanitarium was saved.

In the mountains behind Riverside residents of Idyllwild resort in the San Jacinto Mountains were evacuated by State Highway Patrolmen. State and U. S. Forestry crews, augmented by service men and prisoners from the Riverside County prison camp fought the blaze.

Many roads in the areas involved were closed because of danger to motorists.

Regulations Regarding Christmas Decorations in Hotels

The following regulations have been established by Commissioner Patrick Walsh of the New York Fire Department with regard to the use of trees and decorations in hotels:

1. The tree must be properly flameproofed with a chemical approved by the New York Board of Standards and Appeals, and an affidavit testifying to this fact must be forwarded to the Division of Fire Prevention, New York Fire Department, signed by the flameproofing concern doing the job or the responsible head of the department store, in the event that personnel of the establishment are used to perform this task. In addition to this they must forward a copy of report of the National Board of Fire Underwriters inspection involving the particular tree.

2. A 2½-gallon soda and acid fire extinguisher must be maintained in close proximity to the tree, and so situated that it will be readily available in case of emergency.

3. No stuffed furniture or rugs shall be permitted in close proximity to the tree.

4. No combustible decorations shall be permitted on the tree.

5. The Christmas tree shall be so situated in the lobby that it shall in no way interfere with exits and other means of egress in the contingency of a fire involving the tree. It shall also be so situated that it will not be in close proximity to stairways or other vertical openings that could serve as a flue for any fire that might involve the tree. This would include openings in air conditioning systems, clothes chutes and similar apertures.

6. No other cut flowers, fresh cut decorative greens, natural trees, plants, shrubs or greens, containing pitch, shall be permitted within the public portions of the establishment. Fresh cut decorative greens used as wall decorations for the purpose of a Christmas display must have no pitch content, and shall be properly flameproofed, with testimony to this fact produced in the same manner as described under Item 1. In no instance shall such fresh cut decorative greens be used upon a combustible framework, or be used in conjunction with combustible material, unless said material is properly flameproofed in conformity with the above regulations.

Scenes at the Disastrous Brush Fires

Left: Soldiers battling the brush fire raging out of control in the Topanga Canyon are shown against a backdrop of flames sweeping over a ridge. Right: Charred embers and this stone chimney were all that remained from this home destroyed by the brush fire which swept the Las Flores Canyon area near Malibu Lake, movie colony resort. Residents fled without being able to take any of their possessions.

FLORIDA STATE FIRE COLLEGE HOLDS SUCCESSFUL SESSION

Attendance Largest in History of College; Members of Armed Forces Present at Meeting

THE Thirteenth Annual Florida State Fire College was held October 18 to 22 inclusive, at Miami, in co-operation with the Florida State Firemen's Association. As in the past, the College program was carried out under the direction of the Fire College Advisory Committee and the State Department of Education, Colin English, Superintendent. This year's committee consisted of Charles R. Hale, State Trade and Industrial Education; Chief J. F. MacMillan, Cocoa, Coordinator of Florida State Fire College; Chief F. C. Pfaender, Chattahoochee, Secretary, Florida State Firemen's Association; Chief B. B. Hart, Daytona, Treasurer, Florida State Firemen's Association; Chief Henry R. Chase, Miami, the host; Chief George Hare, Jacksonville; Assistant Chief J. B. Chancey, Jacksonville; Hon. Edwin Larson, Tallahassee, State Fire Marshal; R. P. Goodloe, Jacksonville, Manager, Florida Inspection Rating Bureau; Cooper Cubbedge, Jacksonville, representing the Florida Association of Insurance Agents and Captain J. W. Davis, Miami, Instructor, Miami Fire Department.

Demonstration by Members of Miami, Fla., Fire Department

321 in Attendance

The total registration—321—was the largest in the history of the College and was swelled this year by the presence of numerous members of the armed forces. Classroom sessions were held in the quarters of Fire Station No. 6 at NW 7th Avenue and 36th Street, while the outdoor evolutions and demonstrations were conducted on the drill grounds, with its attractive, completely equipped training tower in the rear of the Station. Perfect weather prevailed throughout the entire week.

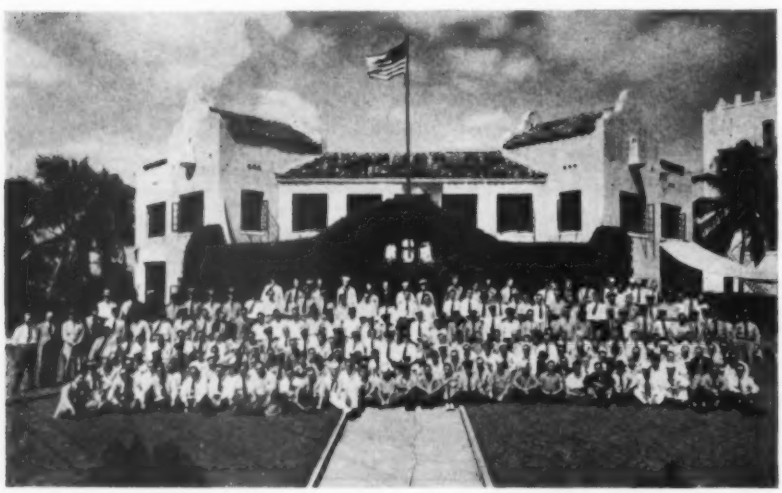
Students were permitted to work out their required 30 hours in one or more of six unit courses, which covered forcible entry, small tools and appliances, ladder and rescue, apparatus, hose and fire streams, salvage, overhaul and ventilation practices, as well as fire department officers conference and fire department instructors training. A brief course in bomb reconnaissance was also held. Buffet lunches were served by members of the Miami fire department who also assisted greatly in furthering the demonstrations and evolutions. Each evening a General Assembly session was held in a nearby assembly hall, at which time the body was addressed by persons prominent in the fire service, civilian defense and State government. An extensive program of motion pictures was carried out at these gatherings.

The College was called to order by Chief J. F. MacMillan who called on Rev. A. E. Gammage for the invocation. Mayor Thompson of Miami then welcomed the student body.

Instructors on appliances, evolutions and fire department practices included Assistant Chiefs J. B. Chancey and J. R. Larabee, the latter of Miami, and Captains Davis, Cromartie and Kline. W. Fred Heisler conducted the course in fire department instructor training. The fire department officers conference, which covered such subjects as the fire service in wartime, shortage of manpower, use of auxiliaries, mutual aid and the like was conducted by Chief Roi B. Woolley.

Assistant Chief J. B. Chancey Uses Model Structure to Demonstrate Points of Ventilation Before Class

A number of special events were held which were heavily attended by students. These included a crash truck demonstration and discussion of crash fires, directed by Captain L. C. Sledge, U. S. Engineers; use and operation of OCD auxiliary equipment, by Chief Henry R. Chase of the Miami Fire Department; electrical hazards, by Chief L. W. Cook, Boca Raton Air Field; incendiary bomb control by members of the Army and Navy, assisted by the Miami Fire Department, and war gas mask training by Captain A. W. Kline. Special papers were presented by A. P. Kitchen, Federal Bureau of Investigation, whose topic was "Protection vs. Sabotage"; "Effect of Water Gases on Fire Service" was covered by Frank King, Mine Safety Appliance Company; Chief MacMillan explained the OCD Fire Guard Program; Chief Roi B. Woolley discussed mutual aid developments and Chief Chase described the very complete radio communication system used by the Miami Fire Department. A member of the State Fire Marshal's office told about State legislation bearing on



Attendance at the College Was the Largest Recorded

Demonstration of Water Fog Nozzle and Applicator on Oil Fire at Florida State College

fire prevention and Mr. Thomas C. Imerson, State Fire Coordinator, talked on the "Civilian Defense Needs in Florida."

The sessions ended Friday, October 22, with a fish fry at the Police Benevolent Association Park, at which time certificates and prizes were awarded.

CHIEF WM. TAUBERT HONORED ON THIRTIETH YEAR IN SERVICE

Offers Suggestions to Organizations for Maintaining Benefits in Post War Period

By John Wood

BEING present at a small gathering in one of the fine establishments Forest Hills has long been noted for, to do honor to one of the finest leaders the fire service has produced, a man who has just completed thirty years of continuous faithful service in the New York Fire Department, I could not help wondering if "Big Bill" Taubert might have a message for the younger men in the service. I asked him about this, and he replied: "Never in the history of the fire service did there exist a greater need for organization and leadership, endowed with the will to do things, and to keep the traditions that mean so much to those who are the backbone of the service.

"An educational program should be one of the prime requisites in the by-laws of each and every fire service organization, to remove any hint of being organized for selfish purposes. There should be one or two powerful organizations in the fire protection field to accomplish the greatest good, instead of many weak ones. Small weak organizations are usually ineffective and are like small streams on a third alarm fire when heavy stream work is what is required.

"Today more than ever the rights and privileges enjoyed by firemen, given to them by many who sacrificed a great deal to obtain these privileges, which include educational opportunities in the fire service as well as financial remuneration and increased recreation periods which our present personnel enjoy today, must be jealously and zealously protected.

"Civil service rights must likewise be protected. They were obtained at great sacrifice. We are living in a dangerous age when anything might or can happen, and to prevent developments which are against the best interests of the fire service, membership of fire service organizations should see to it that only quality leadership is chosen. Otherwise the fire service might lose their four freedoms when the war is over."

Bill Taubert is an honorary member of many organizations. Just recently he was made an honorary member of the New Haven County Fire Chiefs organization and also of the Federal Fire Service.

Watertown Firemen Kept Busy

With most of the city's equipment in operation at a four alarm fire at the Taggart Brothers paper mill on West Main street, Watertown, N. Y., firemen were harassed with another fire which drove six persons from a two-family apartment at 124 Flower avenue east on Nov. 4.

The paper mill blaze, thought to have been started by spontaneous combustion, nearly destroyed a conveyor for coal near the boiler house. Other machinery was threatened for a time as firemen battled thick smoke and coal gas to bring the flames under control within an hour. An estimate of the loss was not immediately available but it was estimated at hundreds of dollars.

Firemen had been working on this call for about a half hour when the apartment house alarm came through at 12:30 P.M. Chief Joseph T. Dibble ordered two pumper companies to the second fire.

Starting in a garage from undetermined causes, the blaze had good headway and was fed by one hundred gallons of kerosene in the building. Swept by a swift wind, the flames spread to the rear of the apartment house, working into the interior and going up into the attic. Damage to the building was considerable. Most of the furniture and household effects were removed from the house.

SANFORD D. DEWEY

New Fire Station for Richmond, Va.

This is one of two new engine houses, built to house suburban companies in Richmond, Va. Both are bungalow stations and will house both engine and truck companies. Due to the restrictions of the WPB the truck companies will not be installed at the present time, but the engine companies will go into service shortly. Chief A. F. Taylor heads up the Richmond Fire Department.

NOVEL SALVAGE EQUIPMENT REDUCES HEAVY WATER DAMAGE

Canvas Dams and Ducts Prevent Uncontrolled Spread of Water Over Floors

GEORGE E. NELSON, a member of the Fire Patrol at Peekskill, N. Y., has developed some novel items for use in connection with salvage operations at fires.

The purpose of this equipment is to reduce water damage by preventing the flow of water over floors into rooms adjoining the fire room and to direct the excess water out of windows or down stairways to minimize damage therefrom.

In describing the use of this equipment, Mr. Nelson says:

"Suppose upon arriving at a fire in a home or small apartment house, and that the fire is on the second floor and will require a couple or three 2½-inch hose lines, men who know their salvage operations go in at once and do all that is possible in the way of covering furniture and directing the excessive water down stairways.

"With this new equipment, and the same crew, the men dam the water on the second floor temporarily, stopping the spread to rooms not affected. By confining the spread of water, less work has to be done below in covering furniture, for there would be less distribution of the water on the floors directly below through seepage or otherwise."

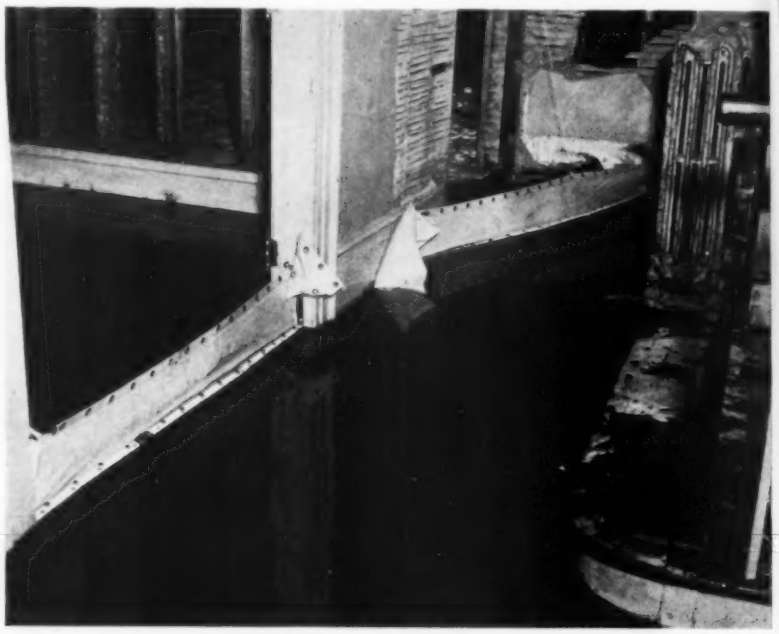
Once the water is dammed, the salvage men would then utilize special equipment to get rid of the accumulated water by way of the stairwell or through a floor. By this operation water damage would be held to a minimum.

This special equipment includes the following units: door unit, floor units, stair unit, collapsible hose, and necessary tools for applying the equipment.

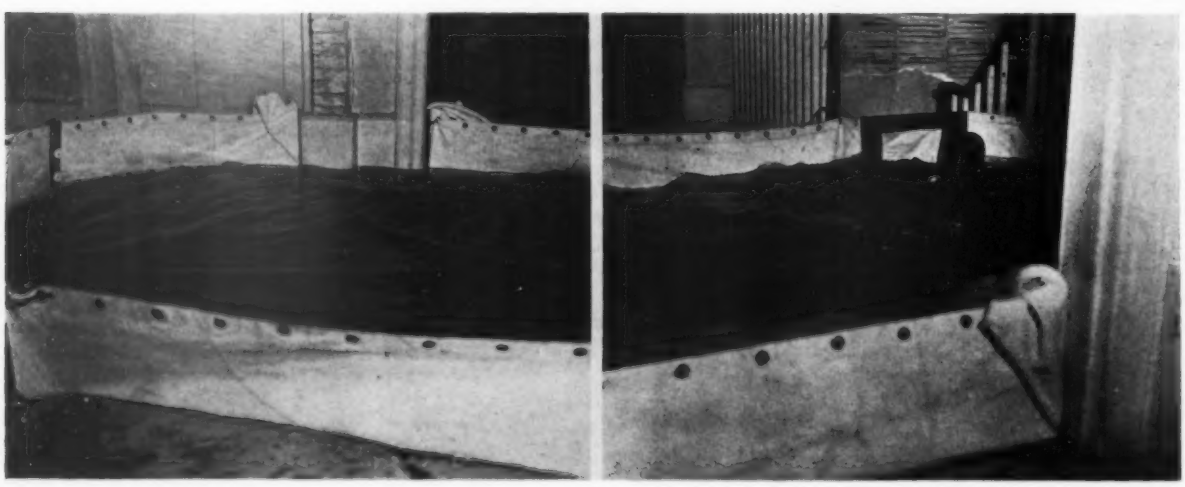
The units for damming the water consist of canvas strips provided with grommet holes on each side, and along the ends. The side of the strip to be attached to the floors by use of nails contain two fitted metal strips, similar to metal molding, into which has been placed a strip of sponge rubber. The metal units and sponge rubber are enclosed in a fold in the damming unit.

The method of applying a unit is to fit it into a doorway, nail the lower strip containing the metal strip firmly to the floor and fasten the ends to the upright frames of the door space. This makes a water-tight dam which will hold water of several inches depth as illustrated in one of the photographs herewith.

If the space to be dammed is wider than the length of the maximum strip carried, two strips can be fastened to-



Showing Damming Strips Placed Across Doorway and also in Corner to Protect a Room Adajcent to Stairwell. Note Method of Attachment of Dams to Floor and to Door Frame



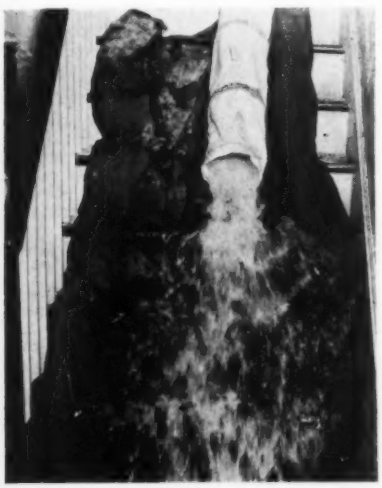
Salvage Apparatus in Operation

Left: Here Three Dams Are Utilized to Confine Water to One Room. Note the Connector Employed on the Dam in the Upper Left-Hand Corner of the Picture to Join the Two Strips Together. The Clamp Is Used when It is Necessary to Dam a Distance Greater than the Length of any of the Units.

Right: Here the Gate to which Is Attached the Duct, or Canvas Hose, Is Shown in Position. The Water which Has Accumulated in the Room behind the Dam Will Flow Through the Gate and Through the Canvas Hose Down the Stairwell or Out a Window to a Point Where No Additional Water Damage Will Be Done.

gether by a special clamp shown in lower left-hand photo on preceding page.

A special gate, to which the canvas duct is attached is also provided. This provides a means of draining off the water which has accumulated behind the canvas dam. Application of this unit is shown in one of the illustrations herewith.



Canvas Hose Discharging Water on a Stairway. Additional Length of Canvas Hose May Be Utilized and Sections May Be Coupled Together to Provide Waterway to the Street If Desired

The whole purpose this novel equipment is to provide a means for confining water to a room, or to a section of a floor in a building, where it may be drained off either down the stairs or through a hole cut in the floor.

Where a hole is cut in the floor, a special floor connection is provided which will permit the water to flow through the opening without spilling on the floor below. From the opening, to which the canvas duct is attached the water may directed out through a window.

Boys Used in Fire Department

Kansas City, Mo., has employed more than 70 seventeen-year-old boys in the regular fire department during the last year and a half as a means of keeping the city's fire fighting force near adequate strength, the International City Managers Association said today.

As part of the program to interest boys who could serve the city a year before reaching draft age, regular firemen visited pool halls and other hangouts to recruit husky boys for the fire department. The boys were given the same physical examination and put through the standard thirty-day preliminary fire training course given all recruits.

After completing this course, the 17-year-olds were assigned to a station with three or four older men. The boys start at the regular rate of $1,440 a year and do the same kind of work as any other firemen though they do require a little more supervision and guidance than usual. Many of the boys drive expensive fire trucks and handle valuable city equipment, but municipal officials do not feel this is out of the ordinary considering youths now in the armed forces are in charge of aircraft and equipment costing thousands of dollars.

By using these youngsters, the city has not hoped to increase the permanent personnel of the department by keeping the boys out of the draft. In fact, all except ten of the original recruits have left the service and it has not been necessary to employ more as many regular firemen have returned to duty after working in war plants.

Young men have not been satisfactory in all cases, according to the director of the fire department, because at this age they are inclined to be playful and somewhat undependable. However, about thirty per cent of these boys did a good job in the estimation of supervisory employes of the fire department.

As an additional measure to maintain an adequate fire department despite the manpower shortage, Kansas City has trained many firemen for private industry to relieve the pressure on regular city firemen to accept fire department jobs in private industries. To date approximately 200 men assigned by industry to be trained as firemen have been put through Kansas City's fire training school free of charge.

PUBLIC ADMINISTRATION CLEARING HOUSE

Blast and Fire Raze Easton Gas Works

A terrific explosion followed by a six-hour fire destroyed a large portion of the Easton, Pa., Gas Works on October 25, killing at least four persons, injuring more than thirty-five others and cutting off gas service to the Easton-Phillipsburg (N. J.) war industry area.

The blast also damaged homes and business structures within a wide radius of the gas works.

As a result 75,000 persons and more than a score of war plants in Easton and surrounding plants were without fuel for cooking, heating and industrial purposes for more than three days.

Plant executives said the explosion occurred in an auxiliary gas tank and that a six-story storage tank was saved, preventing a much worse disaster.

Red Cross disaster forces, moving quickly into the area, set up shelters and feeding stations, including a mobile canteen which served firemen of Easton, Bethlehem, Wilson Borough and Phillipsburg.

In addition more than 1,000 civilian defense volunteers were on hand to assist in fighting the fire and in the rescue work.

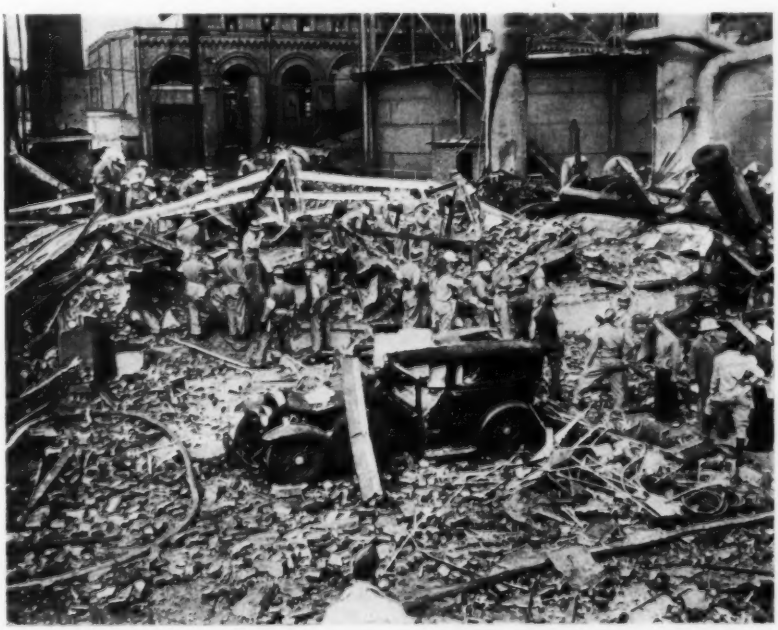
Japanese Internees Sabotage Fire Apparatus

Recent transfer of three large Army fire trucks to the War Relocation Authority's segregation camp located at Tule Lake, Calif., seemingly confirmed rumors of disorders among the disloyal Nipponese which included charges that many were guilty of sabotage.

It was also learned that Congressman Clair Engle, who represents the Tule Lake District, told the Dies Committee in a bill of particulars forwarded to Washington that ringleaders among the camp disloyalists had sabotaged a considerable portion of the firefighting equipment entrusted to their care by the WRA administration prior to disturbances on November 1 and 4 when the Army was called in to take over.

No public statement has been made by the Army or the WRA about the extent of damage done by the Japs to firefighting equipment at the camp.

BOB GREENOCK



Firemen and Rescue Workers Comb the Debris Left by the Explosion

Flames from the wreckage threatened to explode the adjoining tank shown in the background. All fire equipment from Easton, Bethlehem, Pa.; Wilson Borough, Pa.; Nazareth, Pa., and Phillipsburg, N. J., was called into action.

Watsonville Firemen Extricate Child

One of the many extra-curricular jobs of the Watsonville, Calif., Fire Department was the rescue of Judy Ann Amaya, age 2½ years, from a well into which she had fallen.

Chief J. C. Haggerty

The department received a first aid call to extricate the youngster at 10:31 a. m. on October 5. The rescue unit and squad were dispatched and arrived at the scene of the accident in approximately five minutes. Upon arrival they found the child at the bottom of a test hole which was dug the day before by her father preparatory to digging a well. This hole which was dug by a ten-inch post-hole auger was eight feet deep, about twelve inches across the top and narrowing down to ten inches about two feet from the top.

Under the supervision of Chief J. C. Hagerty the squad immediately went to work with bars, picks and shovels, digging an eight foot by four foot hole through hard pan about three feet away from the test hole. A man was dispatched to the local hospital to get a large tank of oxygen and a garden hose was attached and one end lowered into the hole assuring the trapped child of a sufficient amount of oxygen.

The squad worked diligently until a shaft eight feet deep was dug. Then came the work of tunneling back over to the trapped child. In digging the tunnel space was limited to where only one man could work at a time. After tunneling in about two feet, measurements were taken every little while to avoid striking and injuring the child with the bar and screw driver which were used in this operation.

Child Removed Without Injury

The job was a tedious one, but the men were finally rewarded when the screw driver broke through the hard earth into the test hole and the trapped child's leg was sighted. When enough earth had been removed and the child could be taken out, which was at 1:10 p. m., it was observed that her left leg was cramped up behind her and her right arm was wedged between the side of the hole and her chest; also her pet kitten was at the bottom of the hole. She was taken to the local hospital for observation, but was returned home the next day, none the worse for her narrow escape from death. No one saw her fall into the hole, but it was the supposition of all that the pet kitten had fallen in the hole and that the child was trying to find it and had stepped in also.

Fire Boat Powered by Outboard Motor

The little city of Fredericksburg, Va., has a fire boat. Its design and construction are the work of Assistant Chief J. Ford Walker. Completed, the total cost was $1,500.

A fourteen-foot seagoing model runabout was procured and powered with a nine horsepower outboard motor. A twenty-two horsepower outboard was also included in the equipment for any longer or speedier operations.

A 350-gallon-per-minute capacity pumping unit driven by a four-cylinder gasoline motor was the next acquisition. This unit is capable of supplying four 1½-inch hose lines simultaneously. The pumper was mounted on a portable frame and can be set and operated in the boat, on the trailer, or at any point where needed.

A 155-volt motor-driven generator was purchased to supply illumination at night on the boat or shore. This is also a portable unit, independent and complete within itself.

A trailer was provided to transport this equipment, so built that the pumping unit and light plant may be placed in the boat and the boat swung onto the trailer and carried with motor attached to any point and arrive ready for prompt launching.

The boat may also be used in the event of a river flood, where rescue work must be done, or other emergency.

Tennessee Firemen Meet

The Twelfth Annual Convention of the Tennessee Firemen's Association was held in Nashville, Tenn., on October 12-14, with President B. L. Warlick of Jackson presiding.

Newly elected officers are as follows: Chief J. A. Scruggs, Nashville, President; J. L. Waldrep, Jefferson City, Executive Vice President; F. L. Baker, Alcoa, B. B. Qualls, Murfreesboro and C. B. Shaw, Brownsville, Vice-Presidents representing the eastern, middle and western sections of the state respectively; Joe J. Martin, Nashville, Secretary and Treasurer; and W. D. Rogers, Nashville, Historian.

The highlights of the convention were the outdoor activities, including drills and evolutions and a demonstration of air crash equipment; barbecue at Fire Headquarters and a dance.

Theatre Building Damaged by Fire

Fire of unknown origin on November 15 gutted the Reese Theatre Building in Harrington, Del., causing an estimated $150,000 damage to the theatre, a dental office and two stores in the building.

A force of seventy-five firemen from four volunteer companies coming from as far off as Dover fought the blaze more than four hours.

Discovered at 1:05 a. m., the flames spread rapidly through the theatre building before firemen could assemble sufficient force to check them.

When the danger to the business section just west of the theatre, but separated by a vacant lot, became acute, firemen from Dover, Milford and Houston were called in.

Left: Demonstrating the Fredericksburg Fire Boat. Here Two Lines Are Being Driven by the Pump. Right: Showing the Fire Boat in Operation on a Waterside Fire

Practical Training for Auxiliary Firemen

By FRED SHEPPERD
Editor, FIRE ENGINEERING

Relay Lines

LAYING out of relay lines, that is, lines in which more than one pumper is employed, may prove to be a complex problem. Pumpers of different size may have to be employed; some of the hose may be incapable of standing the necessary pressure, and the lengths of the stretches between different pumpers, varying with the size of the nozzle, are but some of the factors which enter into the handling of relay layouts.

While it would be desirable to have pumpers all of the same capacity in such a layout, this is rarely possible. Thus if the engines are spaced equidistant, the smaller units will determine the maximum amount of water which can be discharged through the line.

The size of nozzle has a direct bearing on the layout. If a large sized nozzle is employed, the discharge will be greater, and the friction loss likewise. As the friction loss increases, the distance between the pumpers must be reduced.

It is not the purpose of this discussion to enter into all of the ramifications of relay layouts, but rather to present the simplest of calculations which it is believed will serve in the majority of cases.

For that reason, certain basic considerations are employed: First, it will be assumed that engine pressures above 200 pounds will be impracticable, because of the strength of the hose. Therefore, calculations will be based upon a maximum pressure of 200 pounds per square inch.

It is assumed that an effective pressure will be wanted at the nozzle. Therefore nozzle pressures are assumed to be as follows: 1-inch nozzle, 45 pounds nozzle pressure; 1⅛-inch nozzle, 45 pounds pressure; 1¼-inch nozzle, 50 pounds pressure.

While nozzles smaller than the 1-inch may be employed, data on the smaller nozzles are not included, principally because the 1-inch nozzle is the smallest commonly used by fire departments for operating on fires which have gained headway, which would be the case where relay lines would have to be laid.

It should be pointed out that the efficiency of relay layouts is low, chiefly due to the fact that the maximum power of the pumpers cannot be employed. In the first place, if there is a small pumper in the line with large pumpers, it would not be practical to calculate accurately the lesser amount of hose which the smaller engine could operate through with efficiency. For that reason all stretches between engines are considered equal, and therefore the power of the smaller unit will determine the demands upon the larger unit.

Based on the above assumptions, and conditions, the following questions and answers on relay layouts are offered:

Q. Employing a stretch of a single line of 2½-inch hose, equipped with 1-inch nozzle at 45 pounds pressure, what is the maximum stretch a single pumper can supply?

A. Fifteen hundred feet.

Q. Under the same conditions, when would two, three, four or five engines be required?

A. The following table gives the number of engines required for various stretches. In this table either 500 or 750 gallon pumpers may be employed:

Stretch	No. of Engines
0-1500	1
1550-3400	2
3450-5300	3
5350-7200	4
7250-9150	5

Q. If a 1⅛-inch nozzle is to be employed on a relay layout of a single line of 2½-inch hose, and the nozzle pressure is to be 45 pounds, how many engines would be required in stretches of different lengths?

A. Using either 500- or 750-gallon pumpers, the number of engines for various stretches would be as follows:

Stretch	No. of Engines
0-1000	1
1050-2300	2
2350-3500	3
3550-4800	4
4850-6100	5
6150-7300	6

Q. Where a 1¼-inch nozzle is to be used, at 50 pounds nozzle pressure, how many engines would be required for various stretches?

A. Where a 1¼-inch nozzle is used, it will be necessary to employ pumpers of not less than 750 gallons per minute, if possible, if the engine pressure is to be maintained at not more than 200 pounds.

This is because it would require a 750-gallon pumper to give 326 gallons per minute at 200 pounds pressure.

The discharge from an 1¼-inch nozzle at 50 pounds pressure is 326 gallons per minute.

The following table gives the number of engines required by different layouts.

Stretch	No. of Engines
0-600	1
650-1300	2
1350-2100	3
2150-2800	4
2850-3600	5
3650-4400	6

Q. If 500-gallon pumpers are to be employed with a 1¼-inch nozzle at 50 pounds pressure, how many pumpers would be required for various layouts.

A. If 500-gallon pumpers are employed, it will be necessary to operate them at 120 pounds pressure in order to secure a flow of 326 gallons per minute. At 200 pounds pressure these pumpers could be expected to give 250 gallons per minute each, which is less than the delivery from a 1¼-inch nozzle at 50 pounds. On this basis the following table gives the number of engines required for different stretches of 2½-inch hose.

Stretch	No. of Engines
0-300	1
350-700	2
750-1150	3
1200-1600	4
1650-2000	5

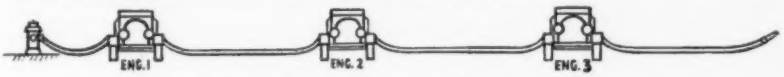
Q. Should the stretch between engines and from the last engine to nozzle be equal in a relay layout?

A. No. The engine pumping through the last stretch, to the nozzle, must not only overcome the friction loss in the hose, but it must also give the nozzle pressure. Thus the length of line from the last engine to the nozzle will be less than that between any two engines.

Q. Assume a relay stretch of 4200 feet is to be made. The nozzle is to be 1-inch and the nozzle pressure, 45 pounds. How many engines would be required, and where would these engines be placed?

A. By reference to the table previously given for 1-inch nozzles, it will be noted that a stretch of 4200 feet will require the use of three engines.

The simplest way of determining the location of the various engines in the line is as follows:



Single Line 2½-in. Hose 4,200 Feet with 1-in. Nozzle

First find the length of 2½-inch hose which would give a friction loss equal to the nozzle pressure, namely 45 pounds.

A 1-inch nozzle at 45 pounds discharges 200 gallons per minute. The friction loss in 2½-inch hose for 200 gallons per minute is 10 pounds per hundred feet.

Thus 45 pounds, the nozzle pressure, would be equal to the friction loss in 45 ÷ 10, or 450 feet of 2½-inch hose.

Then we may say that the entire layout would be equivalent to 4200 + 450, or 4650 feet of 2½-inch hose.

Three engines are to be used. Hence the three stretches through which they must pump will be each 4650 ÷ 3, or 1,550 feet in length.

The stretch from the first engine to the second engine will 1550 feet; stretch from the second engine to the third engine will be 1550 feet; the stretch from the third engine to the nozzle will be 1550 — 450, or 1100 feet.

We subtract the 450 from the 1550 feet as the 450 feet represents the nozzle pressure, and therefore this pressure cannot be used for overcoming friction loss in the hose.

The total of 1550, 1550 and 1100 is 4200 feet, which is the total stretch given.

(Note: Slightly more accurate results would be secured if the inlet pressure of 10 pounds at each engine was considered as 100 feet of hose. Then the calculations for the above problem would be as follows:

4200 + 100 + 100 + 450 = 4850 feet.
4850 ÷ 3 = 1617, or 1600 feet.

The stretch from the third engine to the nozzle would be 1600 — 450, or 1150 feet. The stretch from the second engine to the third engine would be 1600 — 100, or 1500 feet. The stretch from the first to the second engine would be 1600 — 100, or 1500 feet. But these figures fall short of giving the total of 4200 feet as provided in the problem. An additional 50 feet of hose would be put in the line between the first and second engine, giving a stretch between the first and second engine of 1550 feet.)

Q. A relay of 2,000 feet of 2½-inch hose is to be laid, using a 1-inch nozzle. Nozzle pressure is 45 pounds. How many engines would be required for this layout, and what will be the stretch between engines and between engine and nozzle?

A. From the table above it will be found that two engines will be required.

The nozzle pressure of 45 pounds represents 450 feet of 2½-inch hose, where the flow is 200 gallons per minute, and the friction loss ten pounds per hundred feet.

Then we may assume that the total layout will be 2900 + 450, or 3350 feet. Two engines are to be used. Therefore the stretch will be 3350 ÷ 2, or 1675 feet.

The stretch between the first and second engines will be 1700 feet. The stretch between the second engine will be 1675 — 450, or 1225, or 1200 feet.

Q. A stretch of 4000 feet of 2½-inch hose, equipped with 1⅛-inch nozzle at 45 rounds is to be made. How many pumpers will be needed, and what will be the stretches between pumpers and where will they be placed in the line?

A. From the table above it will be noted that three engines will be required.

The flow from the 1¼-inch nozzle at 50 pounds pressure will be 326 gallons per minute, and the friction loss at this flow will be approximately 25 pounds per hundred feet.

Single Line of 2½-in. Hose 4,000 Feet with 1⅛-in. Nozzle

from the last pumper to the nozzle?

A. A 1⅛-inch nozzle at 45 pounds pressure gives a flow of 250 gallons per minute. The friction loss per hundred feet at this flow is approximately 15 pounds per hundred feet.

The nozzle pressure of 45 pounds will represent 45 ÷ 15, or 300 feet of 2½-inch hose.

The nozzle pressure of 50 pounds therefore is equivalent to the friction loss in 50 ÷ 25, or 200 feet of 2½-inch hose.

Then the layout will be equivalent, from the standpoint of hose friction, to 2500 + 200, or 2700 feet.

2700 ÷ 3 = 900 feet.

The stretch from the first to second engine will be 900 feet; the stretch from

Single Line of 2½-in. Hose 2,500 Feet with 1¼-in. Nozzle

From the table above, it will be noted that four engines will be required for this stretch.

The total stretch, that takes into account the stretch equivalent to the nozzle pressure, will be 4000 + 300, or 4300.

As four engines are to be used, the stretch between engines will be 4300 ÷ 4, or 1,075 feet.

the second engine to the third engine will be 900 feet; the stretch from the third engine to the nozzle will be 900 — 200, or 700 feet.

The total of 900, 900 and 700 gives 2500 feet, the stretch given in the problem.

Q. It is desired to set up a 1400-foot relay layout, using trailer pumps of 500

Single Line 2½-in. Hose 1,400 Feet with 1¼-in. Nozzle

The stretch from the first to the second engine will be 1100 feet.

The stretch from the second engine to the third engine will be 1100 feet.

The stretch from the third engine to the fourth engine will be 1050 feet, and the stretch from the fourth engine to the nozzle will be 1050 — 300, or 750 feet.

It will be noticed that because of the fact that hose comes in 50-foot lengths, and that therefore that the stretch must be an even multiple of 50, some of the engines may have to be operated to deliver through a little more hose than can be determined by calculation, while others, to even up the length, may have to deliver through a little less hose than can be determined by calculation. The additional burden is placed on the first engines in the line, rather than on the others.

The total of 1100, 1100, 1050 and 750 is 4000 feet, which is the figure given in the problem.

Q. It is desired to pump through 2500 feet of 2½-inch hose, using a 1¼-inch nozzle, at 50 pounds pressure. How many engines will be required, and gallons per minute capacity at 120 pounds. A 1¼-inch nozzle is to be used, and the nozzle pressure is to be 50 pounds. How many pumps will be required, and how far apart will they be placed?

A. The 500-gallon pumps will have to be operated at "capacity" to give 326 gallons per minute, delivered by a 1¼-inch nozzle at 50 pounds nozzle pressure.

From a preceding table, the number of engines required will be found to be three.

The friction loss in 2½-inch hose at a flow of 326 gallons per minute is 25 pounds per hundred feet. Therefore the nozzle pressure will represent 50 ÷ 25, or 200 feet of hose.

The total layout may then be considered as being 1400 + 200, or 1600 feet in length.

Three engines are to be used; therefore the stretch between engines will be 1600 ÷ 3, or 533 feet. The stretch from the first to the second engine will be 550 feet; the stretch from the second engine to the third engine will be 550 feet; the stretch from the third engine to the nozzle will be 500 — 200, or 300 feet.

Thus the total of the three stretches, 550, 550 and 300 will be 1400 feet, as given in the problem.

Q. How would calculations be made if parallel lines of 2½-inch hose were to be stretched between engines rather than a single line?

Single Line 2½-in. Hose 2,900 Feet with 1-in. Nozzle

A. If parallel lines of 2½-inch hose are used between engines instead of single lines, then the distance between engines may be taken at 3.6 times the value given in the preceding table.

For example, using 1⅛-inch nozzle, two engines would be used to deliver through stretches between 3.6 x 1050 and 3.6 times 2300, or between 3750 and 8250 feet (the products of multiplication are 3780 and 8280 feet respectively; but hose is provided in 50-foot lengths, so that the nearest multiples of 50 feet are taken.)

Q. What general rules are there for the placement of pumpers in relay lines where no specific diameter of nozzle, nor a specific nozzle pressure is given?

A. The following general rules on the placement of pumpers in relay may be employed where nozzle size and pressure are not known or assumed:

Where two engines are used in the line: To determine at what point in a line of hose the second engine should be placed, the first being at the beginning of the line, the following rules are given:

Where a single line of hose is used between first and second engines (engines being of the same capacity) and second engine and nozzle, and where the diameter of the hose is the same in both cases, it is a simple matter to determine the location of the second engine.

Where engines are operating at a pump pressure of 150 pounds, or thereabouts, the length of line from second engine to nozzle should be two-thirds the length of the line from first to second engine.

Where engines are operating at a pump pressure of 200 pounds, or thereabouts, the length of line from second engine to nozzle should be three-quarters the length of line from the first to second engine.

Where engines are operating at a pump pressure of 250 pounds, or thereabouts, the length of line from second engine to nozzle should be four-fifths the length of line from the first to second engine.

Where engines are operating at a pump pressure of 300 pounds, or thereabouts, the length of the line from second engine to nozzle should be five-sixths the length of the line from the first to second engine.

When three or four engines are to be used in a line of hose to relay water a great distance, the simplest layout is to place the engines at equal distances apart. In other words, the length of hose from the first to the second engine, the length from second to third engine, and from the third engine to the nozzle, etc., would all be equal.

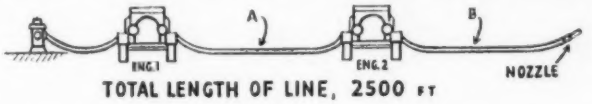
This does not give one hundred per cent efficiency, but it is the simplest manner of placing the engines, and the quickest to accomplish.

In the above, it is assumed that hose of sufficient strength is available to stand the higher pressures given.

Q. Assume that it is necessary to lay 2500 feet of hose to reach a fire. Two engines are available, together with enough hose to stretch a single line, 2½-inch, to the fire. A 1-inch nozzle is to be employed. Where should the second engine be placed?

A. Where engines are operating at 120 pounds, or thereabouts, the distance between second engine and nozzle will be one-half the distance between the first and second engines.

In the figure herewith, it will be noted that line A is the line between the first and second engines, and the line B is, therefore, equivalent to either of the two parts into which A is divided. Together, A and B equal three parts.



TOTAL LENGTH OF LINE, 2500 FT

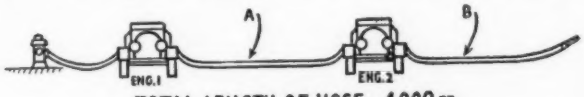
Three parts = 2,500 feet.

Then 1 part = 2,500 ÷ 3, or 833 feet.

A is twice as long, or 1,666 feet, while B is 833 feet in length.

The nearest even length of hose line to B would be 850 feet, and to A, 1,650 feet. Therefore B is 850 feet, and A is 1,650 feet.

Q. If two pumpers, operating at around 300 pounds pressure, are to be placed in a line of 2½-inch hose, 4,000 feet in length, and equipped with 1-inch nozzle, at what point in the line should the second engine be located?



TOTAL LENGTH OF HOSE, 4000 FT.

A. B should be five-sixths of A. B is divided into five equal parts, and A, into six equal parts, giving eleven equal parts. One of these parts is equal to 4,000 ÷ 11 = 363.636 feet.

B, which is equal to five of the parts, is 6 x 363.636 = 1818.18 feet in length.

A, which is equal to six of the equal parts, is 6 x 363.636 = 2181.816 feet in length.

B = 1,800 feet of standard 50-ft. sections, and A = 2,200 feet.

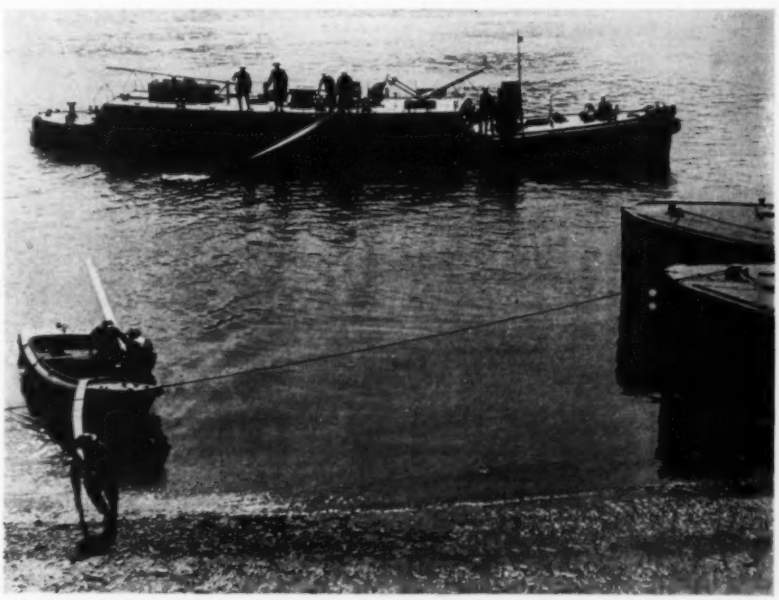
New British Fire Picture Released

"I Was a Fireman," a British Ministry of Information film, tells the story of the British National Fire Service during those nights of 1940 when the Luftwaffe tried night after night to smash the morale of England by fire. Every character in the picture is played by a fireman.

The film is a tribute to the men of the National Fire Service who had for the months before the blitz started, been looked upon generally by the public with a certain amount of good humored tolerance, but who fought night after night an enemy such as men had never had to face before. The fire scenes, realistic in the extreme, explain just what it is to work, in darkness, fighting raging fires, while high explosive and more incendiaries are rained down into the midst of the flames from the enemy planes above.

One of the most moving moments in the film is the early morning scene, as the population start the day after their terrible night and wave to the firemen dead tired and blackstreaked with smoke, sweat and water, as they return to their station. These scenes were taken in Stepney, London, one of the most blitzed areas in the country, and the crowd greeting the firemen had actually experienced many such a night.

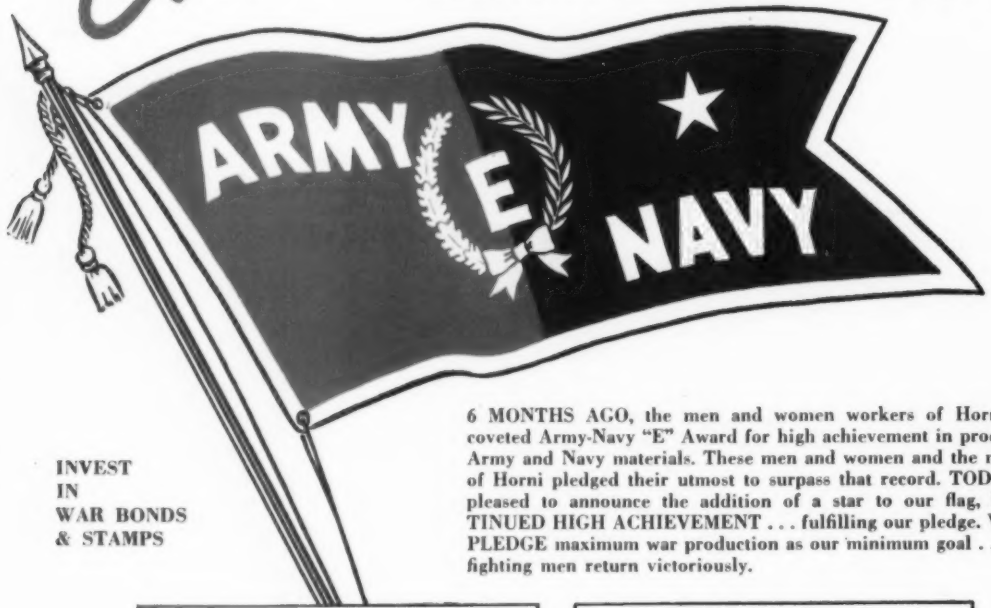
"I Was a Fireman" has just been released for loan and sale for use on 16mm sound machines, through the offices of British Information Services, 30 Rockefeller Plaza, New York City.



A Scene from "I Was a Fireman"

Landing a hose from the fire float that attacks the fire from the dockside.

FOR *Continued* HIGH ACHIEVEMENT



INVEST
IN
WAR BONDS
& STAMPS

6 MONTHS AGO, the men and women workers of Horni won the coveted Army-Navy "E" Award for high achievement in producing vital Army and Navy materials. These men and women and the management of Horni pledged their utmost to surpass that record. TODAY, we are pleased to announce the addition of a star to our flag, FOR CONTINUED HIGH ACHIEVEMENT . . . fulfilling our pledge. WE AGAIN PLEDGE maximum war production as our minimum goal . . . until our fighting men return victoriously.

WAR DEPARTMENT
ARMY SERVICE FORCES
OFFICE OF THE CHIEF SIGNAL OFFICER
WASHINGTON

4 October 1943

Mr. Paul P. Horni, President,
Horni Signal Manufacturing Company,
New York, New York.

Dear Mr. Horni:

In talking recently with the Commanding General of one of our Mediterranean Theatre Army Corps here on a short trip, he impressed upon me the urgent need of mine detection equipment of the (Censored) type. This equipment provides us a direct means of saving the lives of our soldiers.

I noted your fine production results of (Censored) in September and hope the men and women of Horni will continue to put everything you have into production this and the coming months. The need is urgent, and the more sets you produce, the less will be the pain and anguish of our fighting troops overseas.

Sincerely yours,

H. C. Ingles

H. C. Ingles,
Major General,
Chief Signal Officer.

WAR DEPARTMENT
OFFICE OF THE UNDER SECRETARY
WASHINGTON, D. C.

28 August 1943

To the Men and Women
of the Horni Signal Manufacturing Corp.
310 Hudson Street
New York, New York

I am pleased to inform you that you have won for the second time the Army-Navy Production Award for meritorious services on the production front.

You have continued to maintain the high standard that you set for yourselves and which won you distinction more than six months ago. You may well be proud of your achievement.

The White Star, which the renewal adds to your Army-Navy Production Award flag, is the symbol of appreciation from our Armed Forces for your continued and determined effort and patriotism.

Sincerely yours,

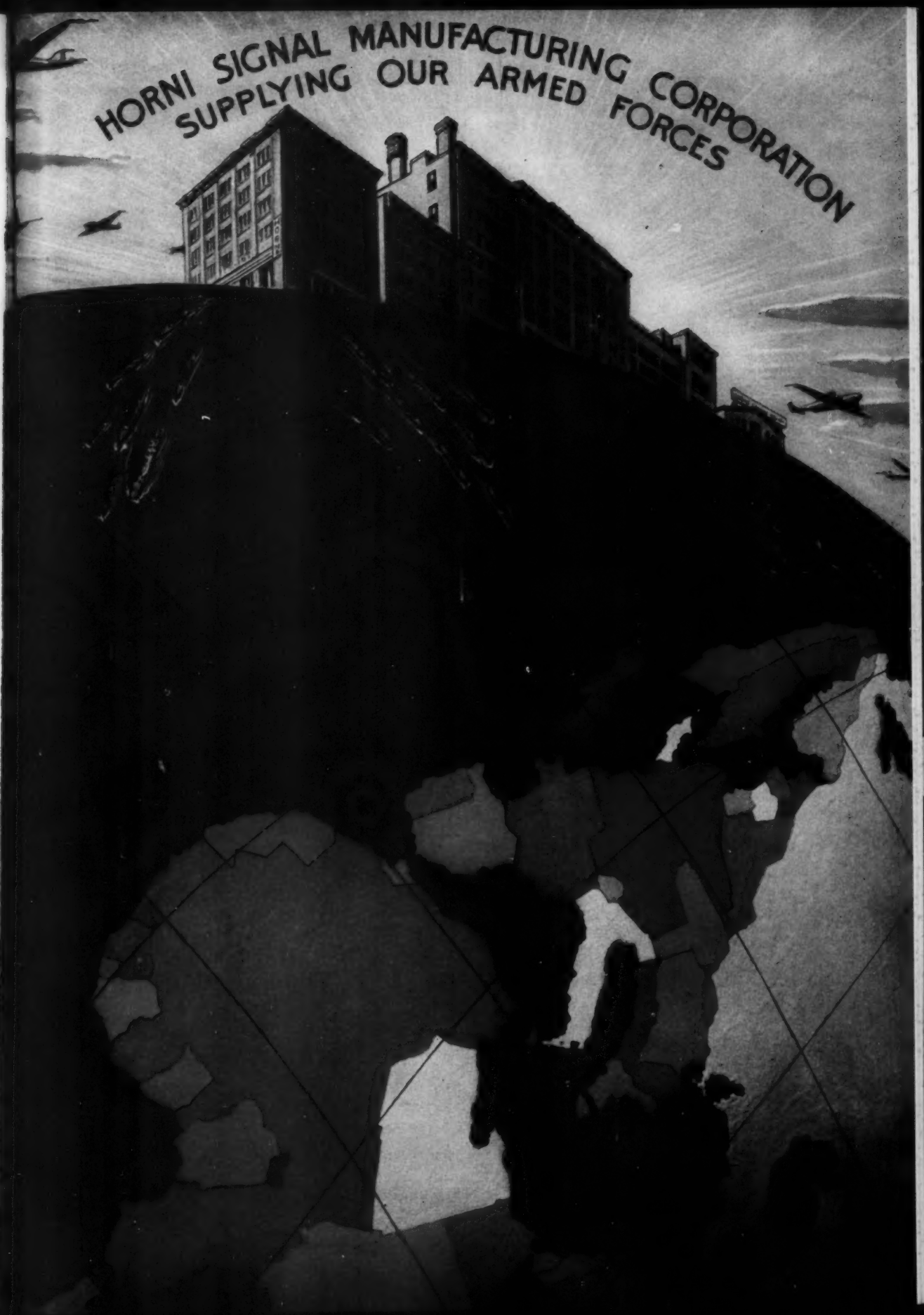
Robert P. Patterson

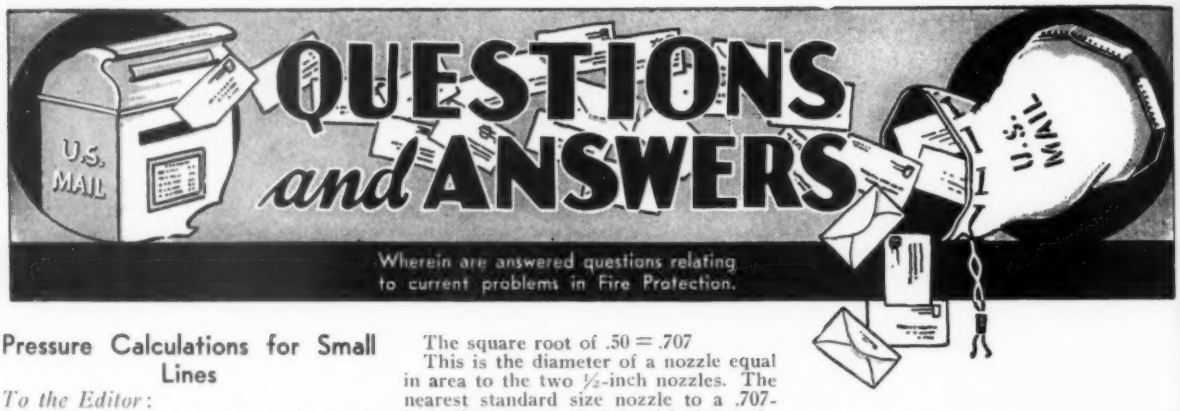
Robert P. Patterson
Under Secretary of War

The Horni organization appreciates the understanding and cooperation of the many municipalities, regarding their own needs for the duration.

Horni

HORNI SIGNAL MANUFACTURING CORP.
NEW YORK, N. Y. **NEWARK, N. J.**


HORNI SIGNAL MANUFACTURING CORPORATION
SUPPLYING OUR ARMED FORCES



Pressure Calculations for Small Lines

To the Editor:

In laying out to a fire using 800 feet of 2½-inch hose equipped with a 1⅛-inch nozzle at 80 pounds hydrant pressure (nozzle is threaded for 1½-inch hose connection) fifty feet of 1½-inch hose equipped with ½-inch nozzle is added to the line. What is the nozzle pressure?

Using the same layout except that a wye and two 50-foot lengths of 1½-inch hose equipped with ½-inch nozzles are used, what will be the nozzle pressure at each of the ½-inch nozzles?

Will the nozzle connection have any bearing on the pressure other than what is shown? W. M.

Answer: Where a hydrant at 80 pounds pressure is forcing water through 800 feet of 2½-inch hose reduced (by way of nozzle) to a 50-foot line of 1½-inch hose with ½-inch nozzle, the solution is as follows:

First change the 50-foot line of 1½-inch hose to 2½-inch.

50 ÷ .074 = 676 feet of 2½-inch hose.

Add to this the 800-foot line of 2½-inch, and we have 1,476 feet of 2½-inch hose in the line.

Then solve for nozzle pressure, considering the 80 pounds as engine pressure.

K for ½-inch nozzle on 2½-inch hose is .00625.

$L = 1476 \div 50 = 29.52$

$N.P. = 80 \div (1.1 + .00625 \times 29.52)$

$= 80 \div (1.1 + .1845)$

$= 80 \div 1.2845$

$= 62$ pounds approximately

The solution to the second problem, where the 800-foot line is branched into two parallel fifty-foot lines of 1½-inch hose, each equipped with ½-inch nozzles, is as follows:

First change the 1½-inch hose to 2½-inch.

50 feet of 1½-inch hose is equal to 676 feet of 2½-inch.

Then combine these two parallel 676-foot lines in a single line of 2½-inch hose.

676 ÷ 3.6 = 187.5 feet approximately.

Add to this the 800-foot line of hose and we have a total of 987.5 feet of 2½-inch hose.

Next combine the nozzles. This is done by squaring each nozzle diameter, adding the squares and then abstracting the square root of the sum.

$½ \times ½ = .5 \times .5 = .25$

$½ \times ½ = .5 \times .5 = .25$

$.25 + .25 = .50$

The square root of .50 = .707

This is the diameter of a nozzle equal in area to the two ½-inch nozzles. The nearest standard size nozzle to a .707-inch diameter nozzle is a ¾-inch nozzle.

Then solve for nozzle pressure on a line of hose that is 987.5 feet in length, 2½ inches in diameter and equipped with a ¾-inch nozzle.

K for ¾-inch nozzle and 2½-inch hose is .0316.

$L = 987.5 \div 50 = 19.75$

$N.P. = 80 \div (1.1 + .0316 \times 19.75)$

$= 80 \div (1.1 + .624)$

$= 80 \div 1.724 = 46.4$ pounds, the pressure at the combined nozzles. This is also the pressure at each of the two ½-inch nozzles in the branched layout.

Incidentally, the use of the nozzles for reducing from 2½-inch to 1½-inch hose does not appreciably change the friction loss in the line. Therefore it is not considered necessary to make any allowance for friction loss in an improvised reducer.

Relay Line Up an Incline

To the Editor:

I have an engine drafting water at the river's edge. A 2½-inch hose line leads from this engine up to a bridge fifty feet over the engine and continuing to a relay engine, then to the fire area. The total length of hose line is 2000 feet of 2½-inch hose. I am using a 1-inch tip and I want a 50-lbs. nozzle pressure. At what point in the 2000 feet will my relay engine be placed? At what pressure will my first engine pump? At what pressure will the relay engine pump? What will be the pressure entering the relay engine and what will be the gallons per minute entering the relay engine? J. J. K.

Answer: The solution to the problem you offer is as follows:

The pumper is pumping to an elevation of 50 feet. As it is taking suction from a river, it is assumed that the lift from the source of supply to the pumper will be 10 feet, making a total elevation of 60 feet for the nozzle above the water surface.

The static head, or back pressure, will then be 60 × .434, or 26.04 feet.

As the second pumper must deliver a pressure of 50 pounds at the nozzle and overcome friction loss in the line of hose, and as the first engine must pump water to an elevation of 60 feet, representing a back pressure of 26 pounds, and in addition must overcome the friction loss in the line of hose to the second engine, both engines will be doing approximately the same amount of work. Therefore the relaying engine, or engine number 2, should be placed in the center of the line, that is, 1,000 feet from the first engine.

Engine pressure at engine No. 2 is found as follows:

$E.P. = N.P. \times (1.1 + KL)$

$= 50 \times (1.1 + .105 \times 20)$

$= 50 \times 3.2$

$= 160$ pounds.

Flow in the line (which is the discharge from the nozzle) is $29.7 \times d \times d\sqrt{P}$.

$= 29.7 \times 1 \times 1 \times \sqrt{50}$

$= 29.7 \times 7.07$

$= 210$ gallons per minute

The friction loss is found as follows:

F. L. in 100 feet of 2½-inch hose carrying 210 gallons per minute is $2 \times Q \times Q + Q = 2 \times 2.1 \times 2.1 + 2.1 = 10.92$ pounds.

Variation in Results from Using Different Formulas

To the Editor:

We have been having plenty of headaches with the following problem which we submit to you for help.

An engine is pumping through 4,000 feet of 2½-inch hose equipped with a ¾-inch nozzle. Nozzle pressure is 40 pounds. What is the engine pressure? When solving by the regular engine pressure formula, we obtain 145 pounds approximately.

When solving by friction loss plus nozzle pressure method, we get almost 30 pounds difference in the answer.

We even went to extremes by employing .7854 on the orifice after squaring it and likewise using .7854 on the K (.0316), bringing it down to .0248, without any success.

We also employed 29.7 instead of 30, which made little difference.

J. C.

Answer: One thing about fire department hydraulic formulas that continually causes trouble is that different formulas designed to give the same unknown information do not give the same results. For example, if you substract the nozzle pressure from the engine pressure, where a hose line is laid horizontally, you would have the exact fric-

tion loss in the line. On the other hand, if you solved for friction loss by any of the empirical formulas for friction loss, you will find that you will get a different answer.

For ordinary hose layouts, but not for extreme layouts, the error is not serious. When you remember that different lines of hose may have friction losses varying as much as fifty percent, due to the construction of the hose, you will see that the error made is thus not of great concern. Fortunately, the Civil Service Commissions give credit for any recognized formula in solving a problem, even though different results may be secured by these different formulas.

Calculations for Small Lines

To the Editor:

I seem to have difficulty in working out problems involving small lines, especially ¾ and 1-inch chemical lines where friction loss has to be found. Using the factor .011 to change one-inch lines to 2½-inch lines, what would be the value of K when using ¼-inch nozzle tip? Would you use the same formula as is used in problems involving larger size nozzle tips?

What nozzle pressure would be used on ¼-inch tip? What would the friction loss be in 100 feet and 200 feet of 1-inch hose and what would the engine pressure be?

W. P. H.

Answer: The formulas for finding engine pressure and nozzle pressure on small diameter lines of hose are as follows:

E. P. = N. P. × (1 + KL)

N. P. = E. P. ÷ (1 + KL), where N. P. is nozzle pressure and E. P., engine pressure.

K is a factor depending upon hose and nozzle diameters, and L, the number of fifty-foot sections of hose in the line.

The following table gives the values of K for different diameters of hose and nozzles:

Hose Diam.	*Nozzle Diam.*	*Value of K*
¾-in.	¼-in.	.235
¾-in.	⅜-in.	1.035
1-in.	¼-in.	.060
1-in.	⅜-in.	.256
1-in.	½-in.	.748

An example of the use of the preceding formula is as follows:

Assume a nozzle pressure of 30 pounds and that the layout consists of 300 feet of 1-inch hose equipped with ⅜-inch nozzle. We are to find the engine pressure.

E. P. = 30 × (1 + .256 × 6)
= 30 × (1 + 1.536)
= 30 × 2.536
= 76.08 pounds.

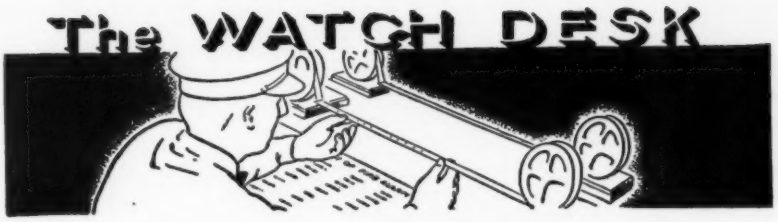
Friction loss in the 300-foot line will be 76.08 — 30, or 46.08 pounds.

Friction loss in 100 feet will be one-third this amount or 15.36 pounds.

Nozzle pressures of from 30 to 40 pounds are satisfactory for a ¼-inch nozzle.

At 30 pounds pressure the discharge from a ¼-inch nozzle is approximately 10 gallons per minute.

With this flow the friction loss will be 3.5 pounds per hundred feet of 1-inch hose or 13.5 pounds for 100 feet of ¾-inch hose.



Our inquiring reporter overhauls the firemanic news of the day

Business of Being Busy!

An anonymous contrib' sends us one from Minneapolis (Minn.) which tells about an embarrasing moment for police switchboard operator Howard. Seems Mrs. Leslie Howard telephoned her husband and he promptly cut her off with a curt: **"Sorry, dear, but I'm busy. Call later."**

When finally, after several attempts she found him free to listen, she told him: **"Les, our home at Coon Lake is on fire!"**

Reports hath it that neighbors rescued four pedigreed dogs and some household goods but the cottage was badly damaged.

* * *

Cow Comes Clean?

According to another reader, the late O'Leary, cow-legend a villainess of the great Chicago fire — may have been the innocent victim of mass slander for the past 72 years. Reputedly, official evidence that the animal was just an innocent bystander at the October 8, 1871 conflagration, was presented at a meeting of Retired Firemen's Association of Chicago by John Dooley, president. Mr. Dooley believes the blaze was touched off by hoodlums drinking near the O'Leary barn. He bases his belief on what he said was a report of investigators shortly after the fire.

Boy and man, on and off, we've heard a lot of argument about who and what started the fire. We're glad Brother Dooley has come to the rescue of Mrs. O'Leary's moo-cow—moo.

* * *

Fire, Water—and Beer!

Out in Los Angeles, according to one of our good contrib's, there was a fire. Upstairs where the fire was 'at,' the firemen went to work and drenched the flames with water. Downstairs, in the building, patrons of a street level bar quenched their thirsts, while upraised umbrellas protected them — and their beer — from the water dripping through the ceiling.

What! — no salvage covers?

* * *

Wife Hadda Message for Him!

Assistant chief Ray Elwell, Portsmouth (O.) learned that fires, like charity, often begin in one's home. Answering a call while he was on duty at a local fire station, he was greeted with an excited: **"Come home quick; the house is on fire!"**

"Who's speaking?" inquired the chief, in his formal "routine" manner. The voice which then shouted **"ME!"** had a familiar ring — it was Elwell's better half!

* * *

Where's a Fire? Stumps Driver of Fire Truck

Francis Poutre, chauffeur for the Mack Fire Engine Company, Allentown (Pa.) was considerably stumped when State Trooper Robert Ward stopped him on the Albany Post Road and asked: **"Where's the fire?"** Mr. Poutre who was delivering a nice shiny, new fire truck to Hudson Falls (N.Y.) admitted he wasn't going to any fire. Justice of the Peace Charles Warren fined Poutre $15 and let him go his way at reduced speed after Trooper Ward said the driver had been speeding, siren wide open, down the road. Tut, tut Poutrie, and just when we're tryin' to solve the siren problem, too!

* * *

Two Fires "Delivered" on Time!

Two contributors send us individual news items about two separate fires each of which was "delivered" to the fire department. The first, from J. McDatells about the firemen of Eng. 10, Chicago (Ill.) department wishing that all citizens would do as did Frank Peterka that city when his garbage truck took fire. Leaving a trail of smoke and sparks, Peterka brought his flaming chariot right to the doors of the firehouse, where the Brothers promptly doused the fire.

The other account is about a fire in Richmond (State not given) and was sent us by contrib' Pvt. Howard Geesler. Seems that this fire came rolling right up to fire headquarters. Unfortunately there wan't no apparatus for fighting it, so a battalion chief located there put in a phone alarm to Eng. 3 a block away. Uh huh huh, the Braves responded and promptly put out the fire — in the back end of a trolley car.

* * *

The Yarn of the Flaming Flannels!

What with the coming of Old Man Frost, Edward Fellows, Evanston (Ill.) motorcycle policeman, was convinced it was time to get into some good old fashioned red flannel unnerwear. Only he was having some trouble finding just what he wanted. Then, came a day when he was on duty — and a fire occurred — of all place — in the storehouse of an Evanston department store. Lo and behold! — firemen tossed scores of nice red flannels into the street — right ferninst Officer Fellows! Now we ask you, what was a man to do in a case like that? Well, he didn't dood it — no siree — every pair of the red flannels had had their southern exposures burned out, and even a motorcycle policeman doesn't like his flannels in that condition.

* * *

Funny!—or Was It?

Reader W. A. Dowell Jr., Walnut Ridge (Ark.) writes us about a member of his local volunteer department who happened to be near the fire station when the city's siren sounded its alarm. Vamp McDowell hopped aboard the

(*Continued on page 789*)

The ROUND TABLE

For Practical Discussion of Current Fire Department and Fire Management Problems

PERMITTING PRIVATE EMPLOYMENT WHEN MEN ARE OFF DUTY

OPINION is about divided as to allowing firemen to work in defense, or other essential, industries in time off from the fire department.

Two requirements seem to predominate in permitting firemen to do out-of-department work. First, they must be available for call in the event of a large fire; second, the off-time work must not be so arduous as to disqualify the men for fire service.

Some of those discussing this Round Table, and who permit private employment of firemen, have found that in some instances, men take jobs as inter-city truck drivers, and are therefore unavailable if called to an emergency. Others, on the day shift, do hard physical work on night shifts at plants and are in no physical condition to do the work required of them by the Fire Department during the day.

Of course, there are some benefits in the plan. Compensation is such that men do not leave the service for defense jobs; the men are better satisfied, and morale is good; a contribution is made toward solving the manpower shortage.

Readers are invited to send in their comments on this subject, for inclusion in the discussion which will be continued in the next issue. Address communications to Round Table Editor, FIRE ENGINEERING, 24 West 40 Street, New York 18, New York.

HERE IS THE QUESTION

In view of the manpower shortage, should firemen be permitted to work at private employment in defense industries when off duty?

What, in your opinion, are the benefits and disadvantages of such a practice?

If men do defense plant work, should they be entitled to full fire department pension rights if injured while engaged in such work?

Discussion of the Topic

C. L. Bolz, Chief, Pasadena, Cal.: In view of the manpower shortage, I believe firemen should be permitted to work at private employment in defense industries when off duty.

The benefits of such a practice are as follows:

1. Firemen are retained on job against higher salaries in private industry. This has been the answer to our resignation problem.

2. It is possible to fill vacancies in the department with good men because it gives a man a chance to make as much money during the emergency as would outside employment, even though he has to work longer hours to get it.

3. Much higher morale and greater satisfaction and stability of personnel has developed.

4. The firemen are aiding the war effort.

5. The manufacturer has been aided in the present serious manpower shortage.

6. Larger pools of off-shift men are quickly available in case of emergency.

We have tried to overcome the disadvantages by setting up stringent conditions under which the men are permitted to accept outside employment. These are as follows:

1. All requests must be cleared through the local office of the U. S. War Manpower Commission as to the kind of employment a fireman can accept.

2. All requests must be cleared through the fire department before accepting employment.

3. No employment is allowed except in critical defense industries directly concerned with the war effort. This is determined by the U. S. War Manpower office.

4. Members are not permitted to take jobs that can be filled by outside labor, or to accept less pay than the standard rate for the respective job. This, too, is determined by the U. S. Manpower office.

5. No employment is permitted outside the city limits.

6. Employer must agree to release the men immediately in case of multiple alarm or other emergency.

7. Members must keep the address, hours of duty and telephone numbers of places of work on file with alarm dispatchers.

8. Members have agreed to invest at least fifty per cent of their outside pay in war bonds.

These conditions I believe offset any disadvantage, except the obvious ones, that interest in their work is divided and that there may be a higher percentage of outside injuries. The last has as yet not been serious. The advantages, in my opinion, greatly offset the disadvantages.

The question of whether firemen in defense plant work should be entitled to full fire department pension rights if injured while engaged in such work is a controversial one. There is no doubt that sooner or later it will come up for a decision. As yet we have had no occasion to put it to the test. Outside employment is, of course, under state compensation and naturally a case of injury should not be covered by both the city and other compensation. Personally, I don't believe it is fair for the taxpayer to cover a person who gets injured in some other line of gainful work. Certainly the system was never intended for that purpose.

C. C. Styron, Chief, Atlanta, Ga.: In view of the manpower shortage, I feel that firemen should be permitted to work at private employment, provided they can be reached easily and quickly if needed. The war effort would be materially aided, and I see no reason to object to four to six hours each day.

The benefits of such a plan would be to aid the fireman financially, thereby helping to keep him on the fire department where salaries have not risen with present day expenses, instead of forcing him to leave the fire service entirely.

The disadvantage would be in allowing the fireman to work long hours because his efficiency in fighting fires might be impaired by extra labor consuming much of his energy.

If men are employed in defense work, I do not consider it right that they be entitled to full fire department pension rights if injured while engaged in such work.

L. L. Woolard, Acting Chief Engineer, Washington, D. C.: I do not believe firemen should be permitted to work at private employment in defense industries when off duty.

The nature of the service that fire-

The "*HOSE-LINS*" will get you if you don't watch out!

Funny looking things—these "HOSE-LINS" aren't they? But they're not funny —not when a couple of lengths of apparently sound hose "lets go" while you're fighting a fire in freezing temperature.

For HOSE-LINS—like GREMLINS which worry our AIR PILOTS—are the unseen forces of destruction that wear, stretch, mildew, rot and otherwise shorten the life of your hose. You don't see their work until it's too late because deterioration isn't apparent until the hose blows out.

We haven't any "Secret Weapon" nor "Magic Bullet" to destroy these pests — but we can help you slow up their work and MAKE YOUR HOSE LAST LONGER.

CIRCUL-AIR THE AIR-CONDITIONING FIRE HOSE DRYER

Does a better job of Drying Hose in 1/10th the time—in 1/4th the space— with 1/3rd the work—or less

★

A Peace-Time Asset . . . . A Wartime Necessity

Saves building repair and construction cost—and improves new Station design.

IMMEDIATE DELIVERY . . . . from STOCK

★

Note Compact Size—and ease of loading and unloading.

CIRCUL-AIR USERS

Over 100 new installations this year in villages and cities of 500 to 1,500,000 population . . . and in Navy Yards, Army Camps, Air Bases, Chemical Warfare Service-Arsenals . . . and most of America's largest AIRCRAFT, TANK, ORDNANCE, SHIPBUILDING, ELECTRICAL, AUTOMOTIVE, TEXTILE and CHEMICAL FACTORIES.

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Detachable Linings

Rubberized or canvas coat and Bunker pants with detachable wool linings. Flexible elastic inner sleeve for wrist keeps out water, cold and sparks. Wool lining can be added to any Midwestern fire coat at small additional cost. Snap buttons make it easy to attach and detach quickly.

Bunker Pants

Bunker pants equipped with removable wool lining, sturdy construction, reinforced crotch for pole sliding. These pants, together with coat as illustrated at left, is Midwestern's combination suit No. 101. Can also be bought separately.

This Trademark

Appears on all genuine Midwestern Protective Clothing. Look for it. It is your assurance of quality and safety features.

IN CITIES

and in a thousand unusual places . . . wherever the sinews of war are being made or used, such as

IN NAVY YARDS

IN SUB BASES

IN POWDER PLANTS

IN AIR BASES

FIRES ARE FOUGHT

by men wearing

MIDWESTERN PROTECTIVE CLOTHING

MIDWESTERN MANUFACTURING CO.
MACKINAW, ILLINOIS

Midwestern rugged protective clothing is designed to give complete comfort and freedom of action. Many safety features, exceptionally rugged construction. Made in CANVAS or RUBBER. See your local Midwestern distributor for prices and literature, or write the factory.

men are called on to render frequently requires the exercise of every faculty, physical and mental, for the preservation of life and property, and there is no schedule by which these emergencies may be anticipated. This demands that every fireman shall be at his best at all times.

Our regulation prohibiting firemen from working on the outside is predicated upon the theory that firemen cannot "devote proper attention to the service, exert their greatest energy and full ability in the performance of their duties in the fire department," and at the same time engage in outside employment for wages. Said regulation tends to prevent firemen from dividing their strength as well as their interest and attention between their departmental duties and outside pursuits. If all firemen were permitted to accept and perform outside duties of such character and for such periods of time as they elect, it would seriously affect the efficiency of the force.

William G. Wandras, Chief Engineer, Kearny, N. J.: Rules and regulations in this department do not permit firemen to do work outside of the department.

Firemen are subject to call twenty-four hours a day and if allowed to work in defense plants would not be available in the event of an emergency.

Firemen working in defense plants on the night shift would not be in fit condition for fire fighting the following day. If injured while working in the defense plant, the department would lose their services and add to the existing manpower shortage in fire departments today.

Firemen injured while working in defense plants would be a burden to pension systems.

R. L. Lampley, Chief, Montgomery, Ala.: The men on this department are permitted to work at private employment in defense industries within the city limits when off duty with the understanding that they are subject to call by us at any time.

THIS DISCUSSION WILL BE CONTINUED

Due to the large number of Chiefs who contributed their experiences, the discussion on this subject will be continued in the next issue.

The most obvious benefit and from a patriotic standpoint is to the manpower shortage. Were these men not permitted to work on their off-time a good many man-hours would be lost. It also benefits the men financially. Since city government salaries cannot compete with those of private industries, it keeps the men better satisfied with their jobs on the department.

Our pension laws do not protect a man injured off duty unless he has had fifteen or more years of service. If he has fifteen or more years of service and is injured in other work, he would receive benefits under the pension laws.

William J. Cawker, Chief, Topeka, Kans.: I believe firemen should be permitted to work at private employment, but not in defense plants.

If they are in private employment they could be called to duty on the department in case of an emergency such as a general alarm. If they work in defense plants they would very probably not be able to leave their places of employment. For that reason they should not be permitted to engage in defense plant work, in my opinion.

Men injured in private employment might and possibly would be entitled to a return of whatever they had contributed to the pension fund, plus a reasonable amount of interest.

Charles Kuhl, Chief, Sioux City, Ia.: Our rules will not permit men to work on their off-shifts.

I can see no benefit to the fire department. If men are allowed to work on their off-shift, they are apt to think more about their off-shift job than they do about their job as a fireman and come back to the fire station to rest up.

If they are injured while working on another job, they should not be entitled to pension rights.

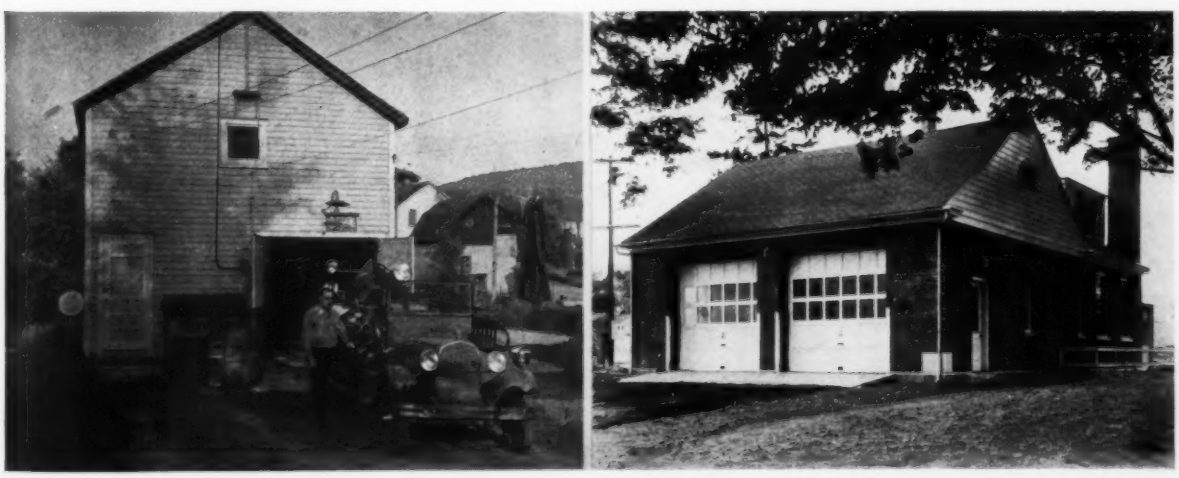
T. J. Kelly, Chief, Springfield, Ill.: The Commissioner of Public Health and Public Safety and myself worked out a plan, relative to firemen working on off-days. Our men work twenty-four hours and are off twenty-four hours. This makes an ideal set-up, and our thought was that it would raise the prestige of the boys in the eyes of the public if they were allowed to take outside jobs during their off-hours. This it has most assuredly done.

Some have obtained employment in vital industrial plants, while others have gotten work in machine shops and garages. Out of our department, which includes eighty active firemen, twenty have taken advantage of the opportunity, which we have granted to them.

We feel that if any of our firemen are injured while in the performance of their duties while in this special work, they should by all means be entitled to full fire department pension rights. This, of course, would apply only for the duration of the war. We have kept the men away from the defense plants and limited them only to vital war plants inside the city. This has a distinct advantage. In case of a big fire, the men could be summoned and report at once.

Joe Carmichael, Chief, Little Rock, Ark.: Personally I feel that the fire department job is a full-time one, especially when there is a shortage of experienced men within the department. If members devoted their days off to

(*Continued on page* 791)



Federal Works Agency Photographs

Before and After Views of the Sidney, N. Y., Fire Station

Left: The old fire house built in 1908, with some of its apparatus dating back to 1829. Apparatus to guard this area, the population of which had quadrupled in the war industrial effort, consisted of a pumper 24 years old, a hook and ladder acquired 19 years ago and an emergency truck. Right: This is the new fire station at Sidney, N. Y., for which a Federal Works Agency allotment was approved and which was built by the Public Buildings Administration. A standard 1½-ton truck, equipped with a 500 gpm pumping unit and 1,000 feet of 2½-inch double jacket hose with accessory equipment and tools, was also bought with money contained in a Lanham Act grant.

Position of Police and Fire Departments in Relation to Draft

On the basis of a survey just concluded by The United States Conference of Mayors, 100 major American cities with a total population in excess of sixteen million, face the possibility of losing over one-third of the uniformed personnel of their police and fire departments through operation of the Selective Training and Service Act.

Cities included in the survey have a present combined strength in the two protective services of 38,633 men. This is 4,454 or 11.5% less than the minimum number required for efficient and safe operation. Of the 38,633 men, 14,036 or 36.3% of their present actual strength are subject to the draft. Pre-Pearl Harbor fathers constitute about 27% of this total. Forty-four out of 100 fire departments and 48 of the 116 police departments reporting have 40% or more of their uniformed personnel subject to the draft. In the case of firemen, Brunswick, Georgia, is highest with 81% under 38 years of age. Eighty-five per cent of Atlanta's police force are in the same category.

When viewed in relation to the problems of replacement, these two vital municipal services, already under-manned, present a potentially serious situation if their forces are further depleted.

Cities generally, cannot hope to secure replacements because: (1) Except for vacancies resulting from death or retirement, employment can only be offered on a temporary basis. Cities have made official the policy enunciated by Congress that municipal employees serving in the Armed Forces should be restored to their former positions or to a position of like seniority status and pay. (2) The wage, or salary, cities are able to pay cannot approach that paid in war industry. This fact together with indefiniteness of tenure proves a poor inducement. (3) Applicants who desire to enter the police or fire service and who meet age, physical and educational qualifications are immediately subject to draft. Deferment is rarely accorded so-called "rookies" on occupational grounds.

Various devices have been resorted to in an effort to overcome these handicaps and keep the services functioning as efficiently as possible.

Age, physical and educational qualifications have been suspended or modified, particularly in the case of temporary or provisional appointments, although many cities have had to make adjustments for permanent appointments as well. Fire houses and police precinct stations have been closed and certain services such as bureaus of identification have been discontinued. Operating personnel of motorized equipment has been reduced.

Where the lure of higher earnings in war industry has not been too great, pensioned members of some departments and those eligible for pension have been persuaded to return or continue in the services for the duration.

These and other measures, at best, have only altered the degree to which the majority of the departments are under-manned and the extent of operating adjustments at the expense of efficiency.

With the high percentage of personnel subject to induction into the Armed Forces the maintenance of the police and fire services at their present strength will require of local Selective Service Boards and responsible Federal officials an appreciation of the present position of the two services and the replacement problems with which they are faced. Translated into action they can and must be maintained at a strength necessary to give minimum protection to life and property.

Army Jeep Used as Fire Fighter

The first two of an estimated fifteen jeeps to be converted into miniature fire engines recently rolled out of the Canadian Mechanical Transport Shop at Ottawa. They will be used in coastal areas.

The converted jeeps will join a fleet of heavier fire reels now in use at Canadian training centers. They are expected to be particularly valuable in mountainous and wooded areas.

Features of the army's newest fire fighting equipment is a Barton type pump which is operated by the jeep's motor. Mounted forward of the radiator, the pump can be put into action in seconds.

Canadian Army Photo

Side View of the World's First "Jeep" Fire Engine. The Unit Is Not Yet Equipped with Front Mounted Pump

Lend Lease Equipment Destroyed in Fire

One fireman died and $300,000 worth of lend-lease equipment was reduced to smoldering ruins recently when fire struck an Army warehouse at East 14th Street and 106th Avenue in Oakland, Cal. Most of the damage was done to trucks and tires awaiting shipment.

An immediate investigation was launched by the FBI to determine whether sabotage was involved.

Also making investigations insofar as the military would allow were the Oakland police and fire departments.

Oakland firemen reported a long delay in turning in the first alarm. According to Chief William Lutkey, Army guards first called the San Leandro Fire Department. The location of the warehouse is just two blocks from the city limits dividing Oakland from San Leandro at that point. The San Leandro department told the guards to notify the Oakland department because the fire was inside the Oakland limits.

First box alarm received was from the corner of 106th Avenue and East 14th Street when some civilian pulled the box. Within the next eighteen minutes at least a dozen other box and telephone alarms were received, some from as far as ten blocks away.

First arriving firemen found the one-story plant a roaring furnace. With difficulty they saved a row of 25 houses immediately adjoining the plant and thousands of trucks and jeeps stored outside the building.

Chief Lutkey and Assistant Chief Manning Basch who were at their homes for supper said they could see the flames and smoke from the other side of town as they responded to the alarm.

Chief Lutkey was quoted as saying: "When I left my home ten miles away from the fire, the sky was aglow and I could see we were responding to a major fire. There was a guard every ten feet in the vicinity of the plant, but apparently nobody thought to turn in an alarm. Civilians in the neighborhood, I am told, finally pulled a box."

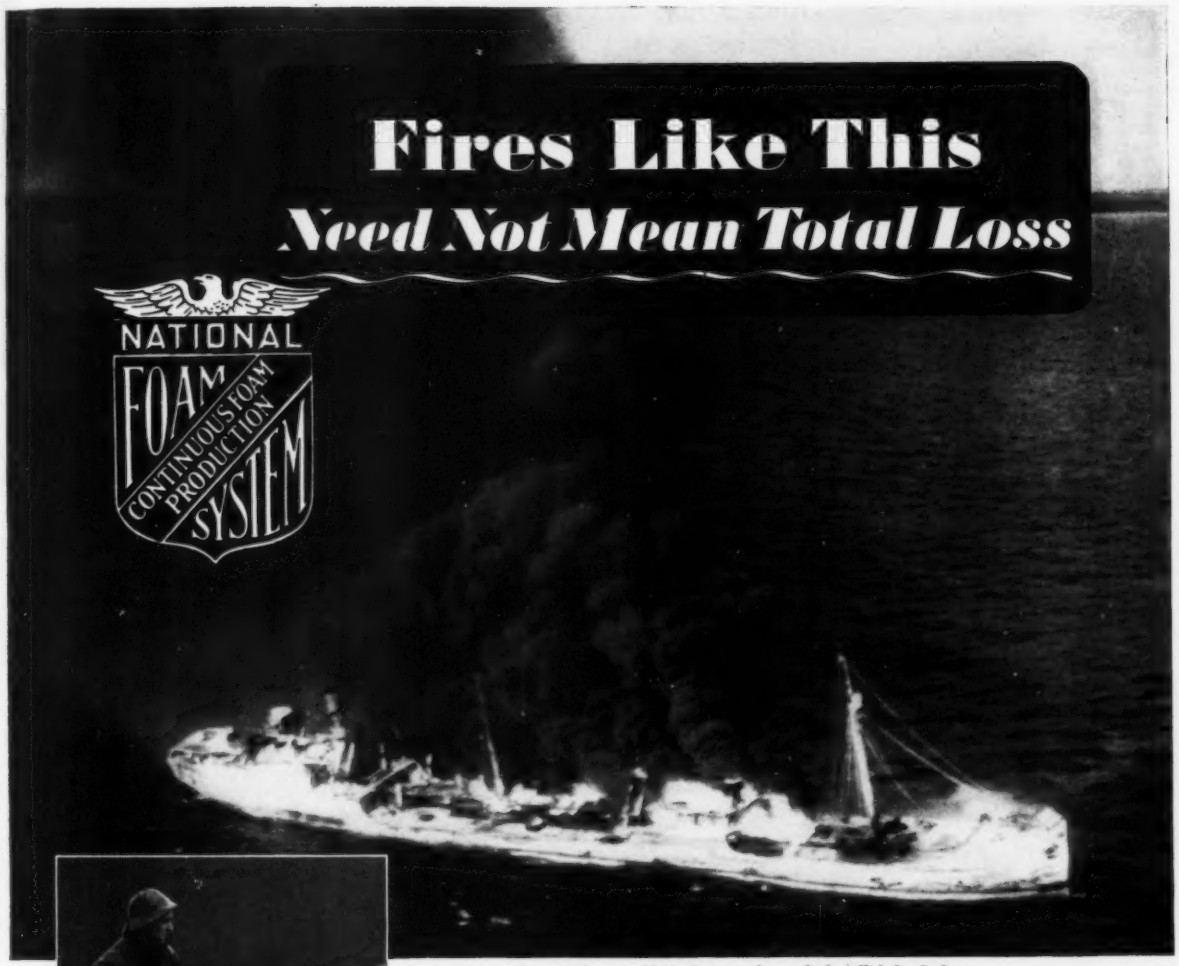
The fireman who died was overcome by the terrific heat and the fumes from the blaze. He was W. P. Chapman, 52, long-time member of the department. He was dead on arrival at hospital.

First box was pulled at 6:17 p. m. on November 8, with the third alarm being sounded seven minutes later. Chief Lutkey found some of the second alarm response at the fire on his arrival because they had responded to vicinity boxes and then reported to the fire as is the custom. He sounded a third alarm at 6:24 p. m.

Mounting flames continued to agitate citizens and vicinity boxes and alarms were received until 6:35 p. m.

A total of twelve pieces of equipment worked at the fire including eight pumpers, a hose wagon and three truck companies.

BOB GREENOCK



One of the two blacked-out tankers which collided off the Florida Coast, October 20th, setting fire to thousands of gallons of aviation gasoline, pours out dense columns of smoke.

RECENTLY, a tanker after a similar collision burst into flames almost instantly. National Foam and Fire Fighting Equipment on that tanker soon brought the fire under control, smothering the flames with its foam blanket, saving the tanker and most of its precious cargo of aviation gasoline.

National Fire Foams have been adopted and are being used extensively by the U. S. Navy, by most oil refineries, and large industrial plants.

National Foams produce a gas-tight blanket sealing out the oxygen, sealing in the combustible gases, and effectively eliminating flashbacks.

IN FIRE DEPARTMENT SERVICE

National Foam System has equipment especially designed for the use of Fire Departments to meet all types of fire fighting requirements. Complete engineering service available.

Most oil refineries and many other important industries are protected by National Foams.

NATIONAL FOAM SYSTEM, INC.

Specializing in Foam Fire Protection

1632 Sansom St., Philadelphia, Pa.

Manufacturers' Announcements

Mack Wins National Security Award

Presentation of the National Security Award to Mack Manufacturing Corp. has been announced by the United States Office of Civilian Defense from Washington. Mack is one of five recent recipients of the award.

The National Security Award is granted by OCD to plants and facilities which have achieved outstanding success in programs for the protection of employees, plants and production or service operations against fire, explosion, air raid, accident and other emergencies.

Buffalo Moves Offices

The Buffalo Fire Appliance Corp., of Buffalo, N. Y., has announced that its executive offices, formerly located at the plant, have been moved to Buffalo's downtown section in the M. & T. Bank Building, 290 Main Street.

This change, effective December fourth, has been made for the greater convenience of the company's executives and their visitors, as well as to provide additional manufacturing space. Factory management and engineering personnel remain at the plant.

R. B. Sayre Appointed Manager Graybar-Memphis

On December 1, R. B. Sayre took up his duties as manager of Graybar's Memphis office. He replaces Mr. O. B. Chandler who died recently after twenty-four years of continuous service with the company.

Mr. Sayre, whose service record with Graybar totals twenty-two years, needs no introduction to the electrical trade having been closely identified with the industry for many years, particularly throughout the Memphis district. He joined Graybar-Memphis as a warehouse clerk in October, 1921, and two years later became salesman, serving the North Mississippi, West Tennessee, and Arkansas territory. In 1939 he was transferred to Graybar-Atlanta as Manager, Outside Construction Department, which position he has held until his recent appointment.

Story Now With Eureka

J. H. Story, until recently connected with the New York office of the Seagrave Corp., has joined the sales staff of the Eureka Fire Hose Division of U. S. Rubber Co. He will handle the territory in New Jersey north of Trenton. Mr. Story has been in the fire apparatus business for more than twenty years and its well known in the New Jersey area. His father was one of the pioneers in the fire apparatus industry.

Prizes Awarded for Signalling Equipment Ideas

At the recent International Municipal Signal Association War Conference held in Cleveland, September 27-29, 1943, the Hudson American Corporation offered war bond prizes for the best suggestions on the development of electronic devices for post-war use in the field of municipal signaling.

According to the sponsor, two reasons prompted this request for suggestions: One, was the determination of the Hudson American Corporation not to take time nor mind from the war work in which they are 100% engaged.

The Contest Was Conducted by Fred Pinkerton, Publicity Manager

Second, was the belief that the best source of such information is by men most concerned. The many practical suggestions turned in reflected sound thinking and vision on the part of municipal signal engineers.

Only three prizes were originally planned, but because of the excellence of the entries, it was decided to include a special award. The four prize-winners and their suggestions follow:

First Prize—$100 War Bond to Clement Wetmore, Superintendent of Fire Alarms, 675 Shepard Avenue, Hamden, Conn.—a walkie-talkie unit for firemen, battery-powered, and fitted with earphones and a throat microphone. With this unit each man can report and receive commands from within burning building. Both hands are free for handling hose ladders rescue work, etc.

Second Prize—$50 War Bond to Herbert A. Friede, Superintendent and Chief of Emergency Communications, Fire Headquarters, 4th Douglas Street, N. W., Washington, D. C.—a chain of mutual aid radio stations to be established on a national basis. One station to be installed in selected Fire Control Center, the State Fire Marshal, or other authority, to designate the installation.

Third Prize—$25 War Bond to L. C. Van Inwagen, Jersey Central Power & Light Co., 501 Grand Avenue, Asbury Park, N. J.—a wireless fire-alarm box, primarily for small districts lacking fire apparatus of their own .

Special Award—$100 War Bond to Alfred Theurich, Fire Alarm Superintendent, 145 East Holly Street, Pasadena, Calif. (President I.M.S.A)—a walkie-talkie unit for fireman, designed with a throat microphone and a single ear plug or a receiver hinged to the helmet. The antenna to be built into the helmet or sewn into the turn-out coat.

Reeves Sound Laboratories Awarded Army-Navy "E"

The Reeves Sound Laboratories, Inc., New York, N. Y., was the proud recipient of the Army-Navy "E" award for excellence in production of vital communications equipment, which, prior to Pearl Harbor, had been produced on a very small scale in this country. The presentation took place in the presence of plant workers at the Waldorf Astoria Hotel on November 1. Left to right are Colonel Conrad E. Snow, Signal Corps Reserve Officer in charge of Legal Branch, Material Division in the Office of the Chief Signal Officer, Washington, D. C., who presented the "E" award; Laurence D. Ely and Hazard E. Reeves of the Reeves Laboratory; Sgt. Alex. J. Kolonics, wounded veteran who attended; Louis Bourguignon, Chief Electrician of the Reeves Laboratories, and Lt. Ralph E. Whitney, U.S.N.R., Headquarters of Commandant, Third Naval District, New York, N. Y.

New Emergency Lighting Bulletin

The Carpenter Manufacturing Company of 179 Sidney Street, Cambridge, Mass., has announced the publication of Emergency Lighting Bulletin No. 144. This publication represents a most complete catalog of emergency lighting equipment.

Always . . . . DEPENDABLE

SPECIFICATION GUIDE

for use in ordering LIFE NETS

1. DUAL SHOCK ABSORBERS, scientifically engineered with recoil mechanism similar to that used in modern artillery. Set firmly on the frame with shock absorber rods in firing position ready to instantly distribute the first shock of impact, permitting the 32 dual shock absorbers to absorb the balance of shock.
2. DOUBLE STRAPS, designed to add greater strength and safety. Pull sustained by four rivets at each point of contact, instead of only one as an old type net.
3. INTERNAL SPRING TYPE AUTOMATIC LOCKS, with ample space for firm hand grip on the sleeves. Simple and positive quick action when opening and closing.
4. HEAVY STEEL FRAME, that will sustain shock of impacts without distortion.
5. FABRIC BOTTOM. The character of the quality and texture of this material is such that it will resist heavy impacts and show only the minimum of sag.
6. MOULDED RUBBER HAND GRIPS, provide a firm grip and prevent friction burns.
7. RUBBER GUARDS on ends of shock absorber rods to prevent chafing.
8. SPRINGS scientifically designed and tested for proper resiliency and reaction.

ATLAS LIFE NETS have a record of unfailing dependability. No other life net has so many special safety features, features exclusive with Atlas nets. The dependability of Atlas nets has been proven through performance. Designed for safety, Simplicity and service, the Atlas life net has won its leadership through service. Every improvement has been tested and approved before it has been made standard.

Atlas life nets are still available—don't be fooled by cheaper prices—remember you only get what you pay for. But in an Atlas you get all that you pay for.

Write for descriptive literature

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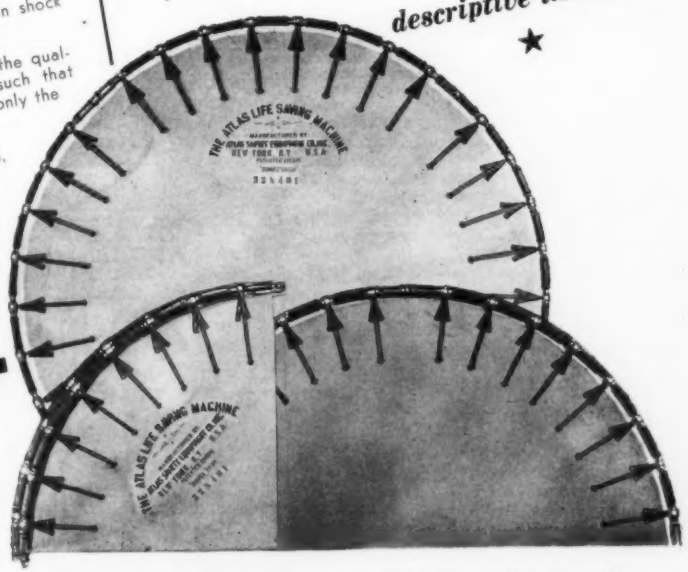

Use these specifications when ordering LIFE NETS ★ PLAY SAFE!

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ATLAS LIFE NETS *"The World's Best"*

ATLAS **SAFETY EQUIPMENT COMPANY, INC.**
formerly ATLAS FIRE EQUIPMENT CO., INC.
26 WARREN ST. NEW YORK 7, N. Y.

FALSE ALARMS

"Naw, Mac! That Aint the Kinda 'Bite' I Mean"

Fair Enough

In Chicago, Tomaso Ricardo, Italian, was being examined as an applicant for citizenship papers.

"Can you tell me how many states there are in the Union?" the examining judge asked.

"Mr. Judge," answered Ricardo, "I talk to you. You know your business, I know my business. You ask me how many states in Union. I ask you how many bananas in a bunch?"

O. K.—All But

It was kit inspection and the soldiers had their things laid out on their beds. The orderly walked into the room and approached Private Brown.

"Three shirts, Brown?" he asked.

"Yes, sir. One on, one in the wash and one in the box," replied the private.

"Two pairs of boots?"

"Yes, sir. One pair on and one pair in the box."

"Two pairs of socks, Brown?"

"Yes, sir. One pair on and one pair in the box."

"Good! Now, where's the box?"

"Dunno, sir; I've lost it."

Shrewd

Three managers of chicken farms in a foreign country, so the story goes, were being questioned by an investigator.

"What do you feed your chickens?" he asked the first.

"Corn."

"You're under arrest! We use corn to feed people."

The second overheard the conversation and tried to play safe.

"What do you feed your chickens?" came the question.

"Corn husks."

"You're under arrest!" We use the husks to make cloth. And you?" he asked, turning to the third man.

"I give my chickens the money and tell them to go out and buy their own food!"

Home Made

Him: "Well, I suppose you're plenty angry because I came home with this black eye last night."

Her (sweetly): "Not at all, dear. You may not remember it, but when you came home you didn't have that black eye."

Punny

Customer: "My goodness, eggs are high!"

Grocer: "Sure; part of the war program."

"How?"

Grocer: "All the hens are making shells."

To Be Precise

A member of a psych class on tour asked an inmate his name.

"George Washington," was the reply.

"But," said the perplexed lad, "last time we were here you were Abraham Lincoln."

"That," said the inmate sadly, "was by my first wife."

Now You've Done It!

The old family physician being away on a much-needed vacation, he entrusted his practice to his son, a recent medical student. When the old man returned the youth told him that, among other things, he had cured Miss Ferguson, an aged and wealthy spinster, of her chronic indigestion.

"My boy," said the old doctor, "I'm proud of you; but Miss Ferguson's indigestion is what put you through college."

Orders

To his Negro company of infantry in camp a black first sergeant spoke dire words: "From now on when Ah blows dis yere whistle, Ah wants to see a huge impenetrable cloud of dust come boilin' outa dem tents. An' when 'at dust clears away, Ah wants to find two rows of statues."

He Looked It

The colored soldier had been peeling potatoes until his hands ached. Turning to a fellow K. P. he said: "What d'you suppose dat sergeant meant when he call us K. P.?"

"Ah dunno," replied his co-worker. "But from de look on his face, Ah thinks he meant 'Keep Peelin'."

Speed

Mike was engaged to do a job of painting for Mr. Smith. After a while he came in, saying the job was completed, and asked for his money.

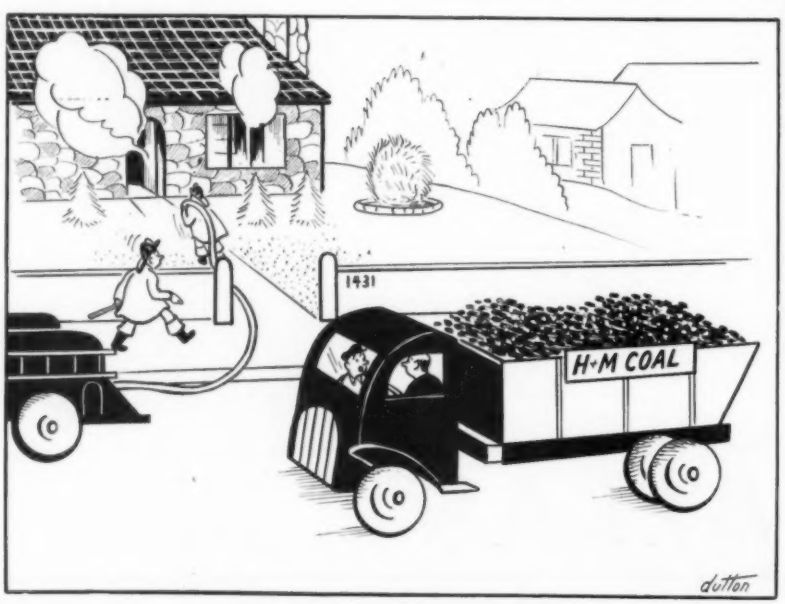
"But, Mike, I wanted two coats on that building. I'll pay after the second coat," said Mr. Smith.

"You've got it," said Mike. "I mixed the first coat with the paint for the second and put on both coats at the same time. Speed is my motto."

Two London shop girls ducked into a doorway just in time to escape a shower of bomb fragments.

"Ain't it terrible, Mazie," observed one, "about this bombing? Y' never know when one of 'em is going to blow you into maternity!"

"And in this blackout," agreed the other, "you'd never know who done it."



"This Is 1431—But Maybe We'd Better Come Back Later!"

Find a phone!.....How do I know where?..Just find one!

FIRE getting out of hand, special equipment needed—and you have to hunt a phone!

No wonder for the umpteenth time you wish you had radio, like police radio.

And why shouldn't you? Firemen need modern 2-way radio communication between fire headquarters and fire trucks every bit as much as the police in your city need radio at headquarters and in their cars.

Already a number of progressive American communities have adopted RCA Radio Systems for better fire protection. Rapid extension of this practice is a postwar certainty.

At present, of course, production facilities are principally devoted to war effort. But why not make plans now? RCA Emergency Communications Equipment engineers will gladly help lay out such a system for your department. Please address inquiries to Emergency Communications Section, Radio Corporation of America, Camden, N. J.

RCA

RCA EMERGENCY COMMUNICATIONS EQUIPMENT

RCA Victor Division • RADIO CORPORATION OF AMERICA • Camden N. J.

Kindly mention FIRE ENGINEERING *when writing advertisers*

VALVES
HYDRANTS
and pipe line accessories

Practical firemen know the vital need of valves and hydrants that "work" when they are needed. M & H products are liked by municipal fire departments on account of their expert workmanship and highest quality materials. M & H Valves and Hydrants are dependable in an emergency.

A. W. W. A. HYDRANTS
Underwriters Approved

Conform to American Water Works Association specifications. Approved and listed by Underwriters' Laboratories and Associated Factory Mutuals. Well known and widely used for many years.

SPECIAL TRAFFIC MODEL (shown at right) is designed to yield at ground line under impact, repair being simply renewal of breakable bolts and breakable coupling on stem. Dry top, revolving head, easy to lubricate. High efficiency because barrel diameter not reduced and there are no working parts or obstructions in waterway.

VALVES: A. W. W. A. types, iron body, bronze mounted with double-disc parallel seat or solid wedge type. Non-rising stem, outside screw and yoke; or with sliding stem and lever. Also furnished hydraulically operated. Square Bottom type operates in any position. All are rugged and dependable, made of best materials with highest quality workmanship.

M&H VALVE
AND FITTINGS COMPANY
ANNISTON, ALABAMA

Chief William T. Happny Dies

Fire Chief William T. Happny of the Concord, N. H., Fire Department died suddenly on November 21 as he was entering his home. He was returning from the Central Fire Station when he was stricken.

Photograph of Chief Happny Taken at the New England Fire Chiefs' Meeting Last June

Born in Concord sixty-one years ago, Chief Happny had been identified with the department for forty-two years, joining as a call fireman in 1901. He was subsequently appointed driver at the Goodwill Hose house when all apparatus was horse drawn. With the advent of motorized equipment, Chief Happny continued at the same post until he was appointed deputy chief in 1931.

On the death of the fire chief in 1933, Chief Happny was appointed to that position by the Board of Aldermen.

Holding membership in many organizations, Chief Happny was well known in New Hampshire and throughout New England. He was First Vice-President of the New England Fire Chiefs' Association and was slated to become its President when the association met this coming year. For years he was Sergeant-at-Arms of the New England Association.

Other affiliations included membership in the New Hampshire Fire Chiefs' Club, of which he was a charter member and a member of the board of directors; the Merrimack County Forest Fire Wardens' Association, the International Association of Fire Chiefs, the New Hampshire State Permanent Firemen's Association, the executive committee of the New Hampshire auxiliary firemen's division of the State Defense Council; member of the executive committee of the State Firemen's Relief Association.

Surviving are his wife, Esther D. Happny and his son, Staff Sgt. William T. Happny, Jr., U. S. Army in Sicily.

Post-War Planning Committee Appointed

Chief Selden R. Allen, of Brookline, Mass., Chairman of the Post-War Planning Committee of the International Association of Fire Chiefs, has announced the following appointments as members of the committee: Chief James M. Duncan, Alexandria, Va.; Chief Charles E. Clark, Wayne, Pa.; Chief William Fitzgerald, Seattle, Wash.; Chief Frank W. Bender, Saginaw, Mich.; Chief Sloan J. Flores, Shreveport, La.; Mr. George W. Booth, Chief Engineer, National Board of Fire Underwriters, New York, N. Y.; Chief Don A. Boulden, Winnipeg, Manitoba; Fire Marshal William J. Scott, Toronto, Ont.; Fire Marshal Arnold C. Renner, Michigan State Police Headquarters, East Lansing, Mich.; and Mr. George J. Richardson, Secretary-Treasurer, International Association of Fire Fighters, Washington, D. C.

The suggested objectives of the committee will be as follows:

1. Additional water supply and adequate distribution.

2. Additional fire stations and modernization of existing stations.

3. Additional fire apparatus and replacement of outmoded pieces.

4. Maintenance of companies at full strength at all times; the number of men to meet the needs of the district or area to be served, but at no time shall the minimum strength be less than standard requirements of the National Board of Fire Underwriters for pumpers, ladder trucks and other apparatus.

5. Reconstruction and extension of fire alarm signal systems including erection of signal stations in locations reasonably safe from conflagrations; additional and uniform distribution of signal boxes and as far as possible, the placing of all fire alarm cables underground.

6. Added protection for occupants of all existing buildings throughout the United States and Canada by the installation of proper and, sufficient means of egress; the installation of sprinkler systems and automatic warning signals.

7. Adequate compensation, improved living conditions, retirement privileges and adjustment of working hours for firemen.

Charter Member of Nyack Fire Patrol Dies

Frank G. Frae, one of the charter members of the Nyack Fire Patrol, died at his home in Nyack, N. Y., on October 18.

Mr. Frae was born in Nyack on July 5, 1873 and had lived there all his life. He was a veteran of the Spanish American War.

In 1917, Mr. Frae with another member, having heard of the work of the New York Fire Patrol, came to that city and through the courtesy of Captain Albert Sidney Johnston, now retired, of Fire Patrol No. 1, went into training for a week.

When these men returned home they each took with them an old salvage cover and immediately put them into service. They were the first such devices ever to have been employed by a volunteer fire department in the Hudson River Valley, or so far as it is known, anywhere else in the country. Subsequently this organization, which had been merely a fire police squad before then, developed the salvage technique and acquired more covers. Mr. Frae had served as President of the Nyack Patrol.

WILLIAM PAUL BABCOCK.

Dorer Chief at Hillside, N. J.

Assistant Chief George Dorer has been appointed Chief of the Hillside, N. J., Fire Department following the retirement of Chief Albert Chamberlain. The vacancy left by Chief Dorer has been filled by Fire Captain August Daviet.

WHAT'S BURNING?

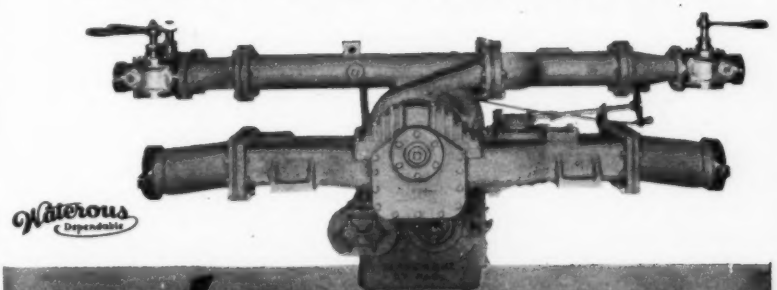
THE following list includes fires of $50,000 loss and over in the United States and Canada, for the month of November, 1943. These figures, compiled from the telegraphic reports, are based on estimates made at the time and are subject to later investigation and consequent revision. Taken as a whole, however, they are an approximately correct view of the losses incurred. The figures represent losses in thousands of dollars.

Month Ending November 30	Losses in Thousands of Dollars
Portage La Prairie, Manitoba—Central bldg. of Crescent Barracks at Army Training Center destroyed	80
Dickson, Tenn.—Restaurant, feed store and grocery store destroyed; Dickson hatchery and warehouse of Fairway Stores damaged	50
Shreveport, La.—Sixteen small CAA training planes destroyed at the Municipal Airport	50
Amesbury, Mass.—American House Hotel destroyed and Ben's Men's Shop, Holaks Boatery and the Leighton Bakery damaged	50
Bradford, Pa.—Kline dept. store bldg. damaged	60
St. Louis, Mo.—United States Indian Service Warehouse destroyed	60
St. Louis, Mo.—Country home of Branch Rickey, Pres. & Genl. Mgr. of Brooklyn Dodgers destroyed	50
Camp Borden, Ont.—Two Royal Canadian Ordnance Corps workshops damaged	80
Chicago, Ill.—The 35-flat bldg. at West Oak Street damaged	80
Los Angeles, Cal.—Pierce Brs. Mortuary in Inglewood and adj. Church Around the Corner destroyed	125
Chestertown, Md.—Fuse bldg. of the Kent Defense Corp. destroyed	80
Montreal, Que.—Bldg. of the United Tire & Supply Co. destroyed	60
Thomson, Ga.—Lokey Mfg. Co. plant destroyed	70
Anaconda, Mont.—Twelve units of Federal Housing project destroyed	80
Henderson, N. C.—The big Henderson warehouse, the Export Leaf Tobacco Co's packing and prize house, and about 300,000 pounds of tobacco owned by Henderson Tobacco Co. and its customers destroyed	170
Dickson, Tenn.—One bldg. on Main Street destroyed; three others badly damaged	50
Los Angeles, Cal.—Casino Gardens, dance pavilion totally destroyed	50
Los Angeles, Cal.—Academic bldg. of the George Washington Carver Jr. High School, damaged	50
Oakland, Cal.—Army warehouse and auto repair shop destroyed	225
Graceville, Fla.—Ten million pounds of peanuts and the Greenwood products plant destroyed	800
Lousiville, Ga.—Bartow Jr. High School bldg. destroyed	80
Springfield, Mass.—Half of the Boston & Albany Railroad's main freight warehouse in the Liberty Street yards damaged	225
Sherbrooke, Que.—Downtown Hotel destroyed	60
Arden, Dela.—Five mushroom houses on property known at the Sunset Farm, a packing house and a two-story residence-office bldg. of the Brandy-wine Growing Co. destroyed	100
Chicago, Ill.—Four story vacant bldg.	60
Catlin, Ill.—Catlin Grain Co.'s elevator and contents of corn, oats and soybeans destroyed	80
Ottawa, Ont.—Premises of Sachs Bros. damaged	80
Magnolia, Miss.—Main bldg. of the Magnolia Cotton Oil Co., branch of the Miss. Cottonseed Products Corp. destroyed	60
Vancouver, B. C.—Storage vault in the dry cleaning section of Nelson's Laundries damaged	50
Halifax, N. S.—Warehouse of Crane, Ltd., damaged	80
Cutler, Cal.—Huge Calgro Winery and more than 1,500,000 gallons of wine destroyed	2500
Chicago, Ill.—Veneer drum factory of the Seymour & Peck Co. damaged	125
Chester, Pa.—Forty trucks and automobiles, including ten new cars housed in the General Chevrolet Co. bldg. destroyed	225

FIRES IN 48 STATES
ARE FOUGHT WITH WATEROUS FIRE PUMPS

IN EVERY STATE in the union WATEROUS Pumps are being used for protection against fire. Throughout the nation WATEROUS Fire Pumps have proven their dependability under severe conditions. Increasing acceptance and demand by the men who use them indicates that WATEROUS Fire Pumps are more than keeping pace with new developments in fire fighting. Specify WATEROUS dependable fire pumps on *your* fire apparatus.

WATEROUS COMPANY • ST. PAUL, MINNESOTA



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CENTRIFUGAL-ROTARY
FIRE PUMPS

AR-POLENE

American Synthetic

—is actually better than natural rubber

Synthetics, developed by American chemists, can be blended in various ways to suit various requirements. We'll use one type of AR-POLENE for a certain belting . . . another type for a certain hose. As a result, industrial rubber products of this company are actually improved in quality. What's more, the shortage is becoming less acute day by day.

Crackerjack Fire Hose

Because its long life under all conditions has been proved throughout the years, this double jacket fire hose is considered the standard on the Pacific Coast.

The

AMERICAN RUBBER *Manufacturing Co.*

Factory and General Offices:

Park Avenue and Watts Street **Oakland 8, California**

★

When Hale equipped, your complete pumping engine will be thoroughly engineered for a high standard of performance and reliability.

Hale Fire Pumps are sold only to manufacturers of quality fire apparatus.

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Write today for the Catalog and Folders on the complete line of HALE PUMPS

HALE FIRE PUMP COMPANY

CONSHOHOCKEN, PA.

CLASSIFIED ADVERTISING

Bids Wanted, For Sale and Help Wanted, $5 per inch. Position Wanted, $2.50 per inch

WANTED SALESMEN

Fire Equipment and Uniform salesmen to sell on the side Morning Pride Protected Rubber Firecoats, with Wing Freedom Sleeves, Chest Protector, Face Protecting Collar, also Firepants and Mitts. Write Morning Pride Mfg. Co., 1986 Home Avenue, Dayton 7, Ohio.

POSITION WANTED

Fire and Safety Inspector, married, 10 years' experience, desires connection in east with assurances of Post-War Operations. Present employment agreeable, but desire Eastern connections. Box 35, c/o FIRE ENGINEERING, 24 W. 40th St., New York 18, N. Y.

FOR SALE—NEW EQUIPMENT

FIRE HOSE—Heavy Duty Single Jacket 2½ and 1½ treated. All kinds of brass goods, sirens, wet and dry battery lights, smoke masks, black or white duck coats, quick hitch suits, rings, helmets, Indian pumps, rubber coats. Whatever you need, write for prices. George F. Doray, 1006 Ballantyne Road, Syracuse, N. Y.

FOR SALE—PUMPER

"MACK," now in service, about 15 yrs. old, in nice operating condition, 400-gallon, type "60" 166" W.B., O A length 21-7, full standard equipment, with windshield, pneumatic tires in fine condition, booster tank about 200 gallons, chemical tank about 60 gal, booster hose and reel. Sea Coast Fire-Coe, 1138 Sewall Ave., Asbury Park, N. J. Tel. 1627-J.

WANTED

1 7½ h.p. 220-440 volts, 60 cycle, 3 phase FEDERAL Vertical Siren, with remote control relay switch and automatic timer control. Write St. Matthews Fire Dept., 3900 Frankfort Ave., St. Matthews, Ky.

Atlanta, Ga.—Five bldgs. of Booker Washington high school destroyed..... 50
Cincinnati, Ohio—Mill of the Rose Bros. Co. destroyed 80
Cleveland, Ohio—Warren Refining & Chemical Co. plant damaged..... 170
Fort Worth, Tex.—Clover Grill, cigar store, Atlas newsstand. Garrant Co. Bldg. & Loan Assn., Dundee Clothers' store and Roy Logan shoe store damaged..... 80
Dallas, Tex.—Texas county day school and contents destroyed 125
Temple, Tex.—Central Texas Compress Co. warehouse and 4,500 bales of cotton, part of govt. loan, destroyed..... 380
Parkersburg, W. Va.—Diesel-electric and digger in the Ohio River damaged..... 50
Montreal, Que.—Hotel Dieu Hospital damaged 340
Fairbanks, Alaska—Pool Room Hotel destroyed 50
Windsor, Ont.—Bldg. of construction firms of Keystone Contractors, Ltd. and Colautti Bros., Ltd., damaged..... 80
Columbus, Ind.—Theatre No. 5 at Camp Atterbury destroyed..... 50
Elkton, Md.—Business section housing ten commercial bldgs. destroyed..... 170
Newton, Mass.—Church of the Messiah destroyed 80
Jersey City, N. J.—Van Dyke & Co. chemical plant damaged..... 200
Columbus, Ohio—Plant of the Natl. Mattress Co. damaged..... 60
Madison, Wis.—Large frame bldg. consisting of central corridor with five wings and occupying about 200 by 500 feet area, equip. used by U. S. Army radio school at Truax Air Field here destroyed 425
Toronto, Ont.—Five floors in Film Exchange bldg. damaged..... 80
Harrington, Dela.—Reese Theatre bldg. housing dental office and two stores damaged 125
Passaic County, N. J.—Elevator grinding and mixing plant of the Little Falls Cooperative Service, Inc. damaged..... 50

Montreal, Que.—Warehouse of Harris & Crossfields of CDA, Ltd., Hobb Glass, Inc., and warehouse of Sun Oil Co. damaged 80
Trenton, N. J.—Gimbel's Store damaged.. 70
Brampton, Ont.—Royal Hotel destroyed... 80
Center Junction, Ia.—The McNeill Seed Corn plant destroyed..... 75
Sikeston, Mo.—Roberts-Davis cotton gin containing thirty tons of seed and carload of cotton destroyed..... 55
Birmingham, Ala.—Warehouse section of pipe fabricating shop of the Crane Co. damaged 60
St. Paul, Minn.—Veterinary Medicine bldg. at University Farm damaged..... 60
Seattle, Wash.—Alderwood Manor chick farm bldgs. destroyed..... 50
Oconomowoc, Wis.—Twelve business establishments damaged 70
Grand Rapids, Mich.—Berkey & Gay Furniture Co. damaged..... 425
Portland, Mich.—Two downtown bldgs. damaged 50
St. Charles, Ill.—St. Charles Country Club destroyed 80
Milwaukee, Wis.—Clubhouse of Milwaukee Yacht Club destroyed..... 50
Morristown, Tenn.—Modern Upholstered Chair Co. destroyed..... 60
Jacksonville, Fla.—Three-story bldg. of Afro-American Life Ins. Co. damaged.... 50
Louisville, Ky.—St. Mathews' Motor Co. and garage housing 17 cars damaged.... 60
Baltimore, Md.—Plant of the Victory Mfg. Co., mfrs. of refrigerators and lockers, and paint shop of the Western Electric Co., damaged 50
Oklahoma City, Okla. — Two-story bldg. housing the Mayes County Mercantile Co. at Pryor, housing apts., damaged..... 80
Pittsburgh, Pa.—Plant of Federal Paper Co. destroyed 170
Summerville, S. C.—Dilling plant of the Ocmulgee Lumber Co. destroyed..... 60
Evansville, Ind.—The Diamond Mills grain elevator and 27,000 bushels of wheat and 7,000 bushels of corn destroyed..... 60

Chief Scruggs to Retire

Chief Jesse Atwell Scruggs has applied for a retirement pension after forty years of service in the Nashville, Tenn., Fire Department.

Born in Nashville on February 15, 1879, Chief Scruggs has seen fire fighting advance from thrilling old smoking, chugging engines drawn by teams of sleek firehorses to the powerful motorized pumpers of today.

When he became a substitute fireman on February 14, 1903, he had been a farrier by trade—a sort of combination blacksmith and veterinarian surgeon—and his talents were utilized in the care of the big, spirited, highly-trained horses.

After serving as a substitute firemen, Chief Scruggs was made a regular fireman on December 18, 1906. He became a lieutenant in August, 1918, and was promoted to a captancy in April, 1923. He became second assistant chief March 1, 1928, and was elevated to chief May 24, 1938.

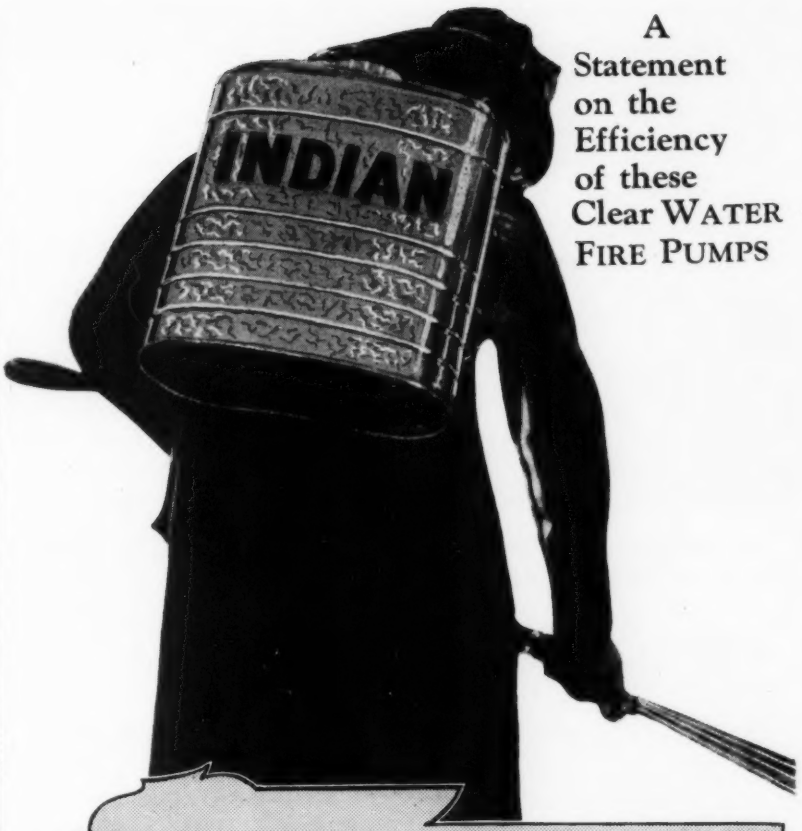
Chief Scruggs is retiring because of ill health.

Federal Firefighters Ask for Increase

It is expected that a bill will be introduced in Congress very shortly, bearing Number H.R. 2565, calling for an increase for all fire fighters in federal employment.

The bill is now in the hands of the House Military Affairs Committee, where it has been for several weeks. It is expected that the House Military Affairs Committee will have it ready soon for introduction into Congress.

The Federal Firefighters Association urges all federal fighters to write to their congressmen urging the support of H. R. Bill No. 2565.



A Statement on the Efficiency of these Clear WATER FIRE PUMPS

INDIAN

FIRE PUMPS NEVER NEED TO BE RE-CHARGED

and "are as efficient inside for the same size fires as they are outside."

"THE **Indian Fire Pump** is a first aid in fire extinguishment. It does not take the place of booster lines or pumpers. It is the equal, if not the superior, of chemical fire extinguishers and hand-water pumps and the equal to *any* extinguisher in extinguishing Class One fires.

An **Indian Fire Pump** can be put in operation faster than a booster line because of the loss of time in stretching the booster line plus the starting of the booster pump.

The **Indian Fire Pump** is as efficient **inside** for the same size fires as it is outside.

If it is necessary for a fireman to lie down to attack a fire, the **Indian Fire Gun** can be used just as efficiently as any other type of extinguishment. A fireman wearing a gas mask should not have any trouble in using an **Indian Fire Gun.**

The **Indian Fire Gun** has been used by our department for a number of years in all fires that could be extinguished or controlled by a fire extinguisher and we have had excellent results. A large percentage of our fires are extinguished by the **Indian Fire Pump.**

Indian Fire Pumps are always backed up by booster lines, hydrant lines or pumper lines."

J. N. Sullivan, *Commissioner*
Department of Public Safety

D. B. SMITH & CO., 406 Main St., UTICA, N. Y.
Pacific Coast Branch
HERCULES EQUIPMENT & RUBBER CO., 435 Brannan St., San Francisco, Cal.

STERLING MODEL "M"

GENERAL ALARM SIREN

You Can Depend On It *ALWAYS*

The Sterling Model "M" Siren, while primarily built for fire alarm signals, is particularly well adapted for the emergency duties attendant on National Defense.

This sturdy public alarm with its shrill, penetrating and distinctive vibrations meets and solves both problems.

Rugged and dependable — it is built to deliver 24-hour service. Its performance has never been equalled by any of the other sirens on the market today!

Write for detailed literature

STERLING SIREN FIRE ALARM CO., Inc.
55 Allen Street Rochester, New York

HOSE BRASS GOODS
WB LINE
THE WOOSTER BRASS CO.
WOOSTER, OHIO

PIN LUG COUPLINGS
GUARD LUG COUPLINGS
SKI LUG COUPLINGS
FIRE MIST NOZZLES
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STATION HOUSE EQUIPMENT
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ADAPTERS
ASSEMBLIES
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PLAY PIPES
EXPANSION RINGS
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STRAINERS

WOOSTER
"TRUMPET" BRAND
BRASS GOODS

The Wooster Fire Trumpet on any product for Fire Department use is your guarantee of QUALITY—DURABILITY and PERFORMANCE. Wooster Brass Company carries a full line of quality brass goods. Fire Departments all over the land are specifying the famous "Trumpet" brand when ordering equipment. Consult the accompanying list of Wooster Products for your needs. Write to us and let us know your requirements and let us send your our literature on any equipment you may be interested in.

★

WHEN YOU SPECIFY PRODUCTS CARRYING THE "TRUMPET" TRADE-MARK, YOU CAN BE SURE YOU HAVE THE LATEST AND BEST IN ENGINEERING DESIGN. THE RESULTS OF OVER 30 YEARS' EXPERIENCE.

★

THE WOOSTER BRASS COMPANY

Fire Equipment of Distinction

WOOSTER, OHIO J. C. SCHELLIN, Pres.

Watch For Many New Items In Our Line

Correspondence

Minnesota Fire Schools a Success

To the Editor:

We have just completed our regional fire schools for this season, and inasmuch as I feel we have had quite a successful season, I thought you might be interested in the attendance record, which is as follows:

	Registration	Towns Represented
Northwest Fire School at St. Paul	416	100
Cuyuna Range Regional at Browerville	83	14
Arrowhead Regional at Duluth	140	29
West Central Regional at Granite Falls	75	17
Lake Region Regional at Alexandria	108	17
Southwest Regional at New Ulm	280	50
United Fire Fighters at Chaska	169	27
Northern Regional at Crookston	100	18
Northern Regional at Mahnomen	147	19
Southeast Regional at Austin	303	47
St. Croix Valley at Osceola	208	28
Total	2,029	366

Also in connection with each of our regional schools we this year conducted a contest in evolutions which created considerable interest, and the winning team at each of these schools will take part in a final contest to be conducted at our 1944 Northwest Fire School.

We are already making arrangements for our 1944 Northwest Fire School, which will be held on May 15-17 in St. Paul. This school is held alternately two years in Minneapolis and St. Paul.

Most of the important functions of our department are acted upon in cooperation with our Advisory Council, which consists of nine fire chiefs situated in various parts of the state. This council meets with State Fire Marshal Johnson and the writer about every three months and their assistance and suggestions in connection with matters pertinent to our department have proved invaluable.

Yours very truly,
LEONARD C. LUND
Deputy Commissioner
Fire Marshal Division

Single Jacket Hose

To the Editor:

I wish to take exception to your editorial in the August issue of FIRE ENGINEERING, on single jacket fire hose, in which you state "It seems to us that supplying any but the smaller municipalities with single jacket hose is poor policy.

As a rule the smaller departments have a smaller supply of hose to begin with than the large departments. We have to lay just as long, and sometimes longer, lines than the larger cities and use as much pump pressure as they do.

In Amherst we cover approximately 100 square miles, furnishing fire protection to three small towns in addition to our own. We have laid on occasion lines as long as 2,000 feet, due to scarcity of water supply.

When laying these lines it is often necessary to drag hose through brush, sand and rocks in order to stretch the lines the shortest distance. When we

lay lines outside of our own town, every job requires a pumper.

We have used single jacket and it just will not stand that type of usage due to the snagging of lines on stumps, stones, etc. This has caused chafing and with single jacket hose this will naturally weaken the jacket.

It is my opinion that due to these circumstances it is more essential for smaller rural departments to have double jacket hose.

Very truly yours,
HAROLD E. WARNER, Chief,
Amherst Mass.

From One of Our Former Correspondents

To the Editor:

Just wondering if there might be any fire fans or officials in this remote corner of Georgia that I might meet.

I have been here a month and am assigned to the Public Relations Office, as one of three enlisted men who write the weekly newspaper issued on the field. I like the work.

Sincerely,
CORPORAL OTIS SMITH, 33373866,
322nd Air Base Squadron
Basic Pilot School
Bainbridge, Ga.

New York Fire Department to Make Christmas Inspections

Because of the emergency that exists during the Christmas Holiday Season, as a result of overcrowding and the accumulation of rubbish and other combustible materials in departments stores, battalion chiefs and company officers of the New York Fire Department will make daily inspections of both large and small department stores within their battalion and company districts.

Inspections are to be made frequently at irregular intervals, with a view to eliminating any fire hazards which may be discovered and which may be detrimental in case of fire to the public safety. In case there is any accumulation of combustible waste material, rubbish, etc., a verbal order will be issued to the proprietor, or person in charge, to promptly remove the same from the premises and complied with without delay.

Officers and members, when making these inspections, will endeavor to have "No Smoking" signs displayed in conspicuous places throughout the building, particularly in public elevators.

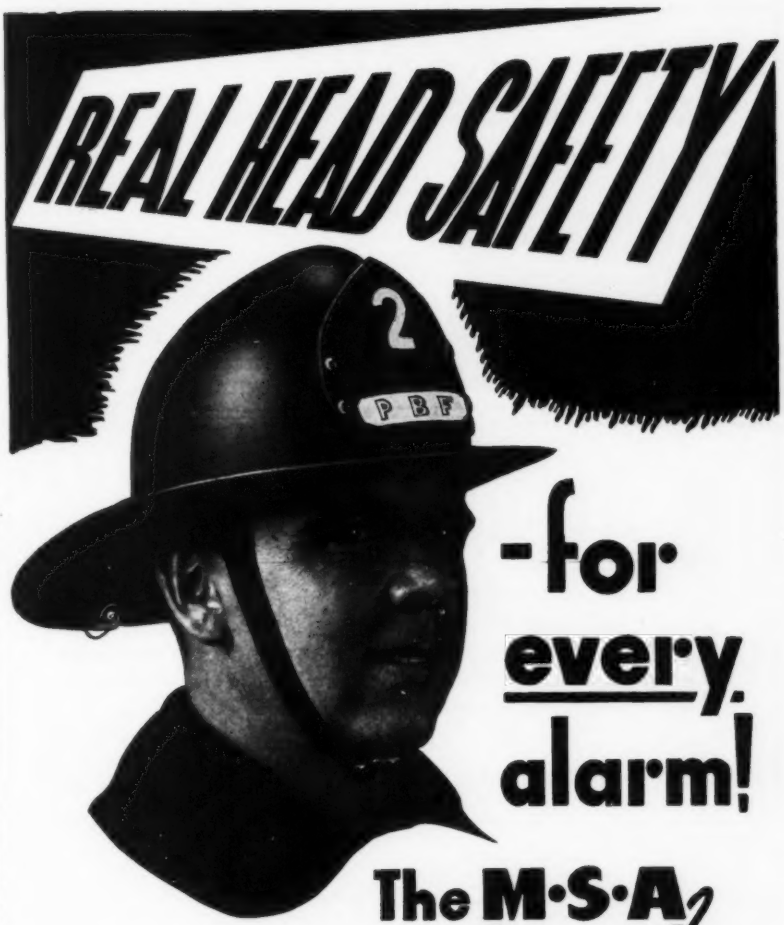
Deputy chiefs and battalion chiefs will personally visit department stores and check up inspections made, which will continue until December 31.

Personal inspections made by company officers in compliance with this order will be reported in writing on Monday of each week until January 3, 1944.

Women Students Fight Fire

Women students of Mills College, Oakland, recently fought side by side with city firemen when a serious brush fire which skirted Lake Aliso on the campus, destroyed 100 towering eucalyptus trees and threatened the campus administration building and postoffice.

BOB GREENOCK



-for every alarm!

The M·S·A Streamlined FIREMAN'S HELMET

PROVIDING top safety, comfort and durability on normal fire-fighting assignments everywhere, this new and widely-popular M.S.A. Helmet qualifies on every count for the added demands of wartime service. Falling and flying objects, chemicals, and live wires are countered by strong, non-softening, high dielectric strength laminated bakelite construction. *Comfort* on-the-job is assured by light, well-balanced design and special features. For the facts — write for Bulletin No. DX-5, or ask for a demonstration!

MINE SAFETY APPLIANCES COMPANY
BRADDOCK, THOMAS and MEADE STS. . . . PITTSBURGH, PA.
DISTRICT REPRESENTATIVES IN PRINCIPAL CITIES

Reeves

FLEXIBLE STRETCHERS

No. 101

Every casualty, no matter how slight or how serious, can be made worse by rough, improper handling. Reeves Stretchers can be used in the most inaccessible places.

If your dealer cannot supply you, write to:

A. SMITH & SON, Inc.
1237-39 RIDGE AVE.
$14.50 PHILADELPHIA, PA.

EDDY
Fire Hydrants

Are given preference by so many fire protection and water works men because they know that more than half a century of experience goes into their manufacture and they embody valuable and exclusive features.

Write for the FACTS.

EDDY VALVE CO., Waterford, N.Y.

SIRENO
SINCE 1908 — THE PIONEER COMPANY
EXCLUSIVELY MANUFACTURING SIRENS
PRECISION MADE • LONG LIFE • UTMOST IN DEPENDABILITY
THE SIRENO COMPANY, INC.

YOUR PERSONAL COPY

Today—more than ever—each of us is responsible for doing his job as efficiently as possible. FIRE ENGINEERING, the only independent publication serving the fire protection field exclusively—will keep you thoroughly informed on all phases of fire fighting.

The cost is still only $2 for a year's subscription.

CIRCULATION DEPARTMENT

FIRE ENGINEERING

24 WEST 40TH STREET NEW YORK 18, N. Y.

WAR FARE

Alarms and Discussions Clipped and Culled from the War News of the Day, of Interest to the Fire Service.

Just a Slight Fire!

They're telling this one in Washington. Seems that one night, some time ago, a call came from the War Department after General Marshall had gone to sleep. No doubt you know who General Marshall is? Mrs. Marshall answered the phone and tried to take the message—she does her best to help the General get his quota of "shuteye." But the voice at the other end was insistent.

Mrs. Marshall tried again. *"The general is asleep, and I'd rather not disturb him. Is it anything important?"*

"Oh," said the voice, with a touch of sarcasm, *"it's just that the War Department is on fire!"*

* * *

Heeded Warning Slows Bond Sale

In Idaho Falls (Ida.) a fire truck raced through crowded downtown streets with the siren screaming, but it failed to draw the expected crowd of fire chasers to the scene of a war bond auction.

Unaware of the purpose of the run, motorists for once, heeded the oft-repeated warnings not to follow the fire trucks when they heard the siren.

* * *

When Is a Blackout?

In Columbia (S. C.) Mrs. T. W. Dreher didn't hear the air raid sirens because she was engrossed in a book. A warden stepped to the window and asked her to put out the light. She complied.

In a moment he was back. *"I meant all the lights,"* he said; *"you can't have one in your kitchen either."* Mrs. Dreher said there was no light on in her kitchen. Investigating, they found the room on fire. Fire guards put out the flames.

* * *

Noisy Summons!

The roar of airplanes overhead, the warning squall of auto horns, and the crackle of flames—destroying the town's biggest store, awoke residents of the Western Utah town of Kanosh. It was no air raid, the townsfolk learned. The racket was an effort to summon the volunteer firemen. The airmen? They were just perched "upstairs" watching the fire! (Thanks, Robby.)

* * *

Action Overhead

Aerial traffic continues to increase, and with it the hazards engendered for the fire service, as witnessed by these contributed items:

NASHVILLE, TENN.: An American Airliner carrying six passengers and four crew, crashed and burned near Centerville, Tenn. The ten were found dead in or near the charred wreck.

DYERSBURG, TENN.: Nine Army airmen parachuted safely from their burning Flying Fortress near Alamo, Tenn., after unsuccessfully battling the flames for several minutes.

LONG BEACH, N. J.: Eight officers and men were considered lost in a mid-air collision of two navy blimps off the fog-bound coast of New Jersey. One, damaged, returned to base, the other plunged into

surf near Barnegat Inlet, narrowly missing houses.

SAN FRANCISCO, CAL.: A naval plane crashed into a vertical cable on the San Francisco, Oakland Bay Bridge, severing the cable and killing the pilot. Error in practicing carrier landings. Luckily, no fire, no cave-in of bridge.

EL PASO, TEX.: Twelve men were killed in the crash of a heavy bomber while on "routine flight."

PHILADELPHIA, PA.: Two airmen from Atlantic City (N. J.) Naval Station were killed when plane crashed in mountains of Pennsylvania. Bad weather blamed.

FT. LAUDERDALE, FLA.: Three members of naval personnel were killed in crash of navy bomber near here. No details.

MEMPHIS, TENN.: Entire crew of a Flying Fortress were killed when the big plane crashed in an open field.

WENDOVER FIELD, UTAH: When a four-engined Liberator bomber crashed east of here, eight of crew were killed.

EDMONTON, ALTA.: Eleven officers and men were killed in crash of a heavy bomber in the Yukon territories. Two more died in crash of another plane attempting to rescue the first victims. Details of the fires resulting are lacking.

COLORADO SPRINGS, COLO.: When a flyer's heart went bad, his plane crashed and burned near Falcon, Colo.

ALEXANDRIA, LA.: All eight members of a Flying Fortress crew perished when their plane crashed soon after taking off from the army air base.

FT. BENNING, GA.: Two officers and four enlisted men were killed in crash of an army transport plane, while on a "training flight."

CAMP MACKALL, N. C.: Fourteen officers and men were killed and four seriously injured in the crash of a transport plane in the sandhills of N. C.

Chester County Fire School Held

Graduation exercises of the Chester County, Pa., Firemen's Association School of Practical Training were held on the evening of October 6 in the quarters of the Alert Fire Company at Downingtown, Pa. These exercises marked the official close of the 1943 sessions of the school.

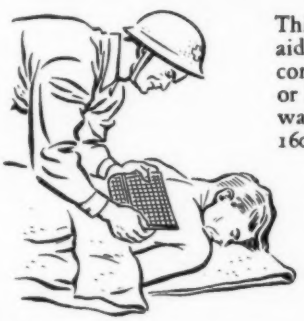
The training program of the school consisted of fourteen weekly sessions of two and one-half hours each, held each Tuesday evening beginning June 1.

The school was divided into four sections, namely, Section A which included forcible entry and minor extinguishment, salvage and overhaul, fire department rescue, rope work and gas mask instruction; Section B which covered ladder practice; Section C on hose practice and Section D on fire apparatus and light plants.

In setting up the program, Arthur W. Espey, Advisor of Fire Training, Public Service Institute, Pennsylvania Department of Public Instruction, gave the Association valuable assistance.

Twenty-four Chester County companies and two Lancaster County companies were represented in the enrollment. Three hundred fifteen were enrolled and these men received a total of 6,415 man-hours of instruction. Out of the total enrollment, 155 men qualified for Public Service Institute certificates, and all who attended were given pocket cards issued by the Chester County Association showing the hours of instruction they had received.

YOU NEED LIGHTNINGPAK *for* FIRST AID!



This modern heat pad is a MUST in your first aid equipment. LIGHTNINGPAK is neat, compact, easy to pack. Requires no electricity or hot water Just pour two spoonfuls of cold water into it — Lightningpak heats up to 160° *in just a few seconds, stays hot 8 hours!*

Lightningpak is flexible, molds itself comfortably to any part of the body Convenient tapes hold pad where heat is needed. Ideal for treating shock, gas poisoning, or wherever quick heat is needed. Used on every front by the armed forces.

Refill heat units are inexpensive and easily replaced. Keep Lightningpak in your emergency car. *Order your supply of essential first aid heat pads now!*

LIGHTNINGPAK
95 Chapel St., Newton 58, Mass.

LIGHTNINGPAK PRICES TO FIRE DEPARTMENTS
Lightningpak Complete, $8.00 per dozen. Heat Unit Refills, $3.60 per dozen. Samples gladly sent at per dozen price.

A BADGE *to be proud of* NOW *more than ever* BEFORE

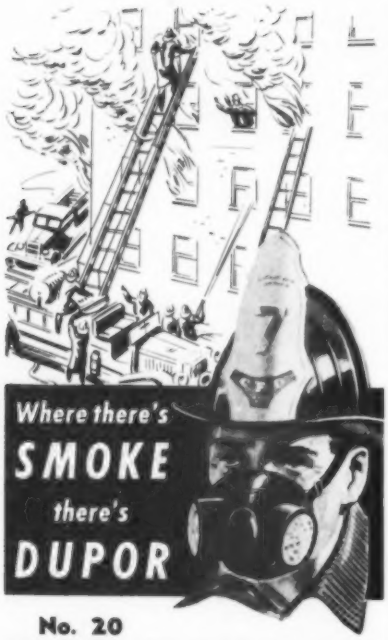
Now—because of the Government's prohibition of the use of nickel, brass, copper, nickel plating, and chromium—we are making these badges and insignia in sterling silver, sterling silver gold plated, rolled gold on sterling silver and 14 karat gold.

Today—for just a little more, you get a sterling silver Braxmar Badge—without doubt the best badge you can buy anywhere.

The blue covered catalog is the latest published but write for our new price list, effective July 29, 1943. Only prices in the catalog on 14 karat gold items are still in effect. All auto plates are discontinued for the duration.

C. G. Braxmar Co., 242 W. 55th St., N. Y.

BRAXMAR BADGES
Standard for over 60 years



No. 20
TWIN SPONGE SMOKE MASKS

Double protection for "smoke-eaters." Double sponges filled with water provide cool, smoke-free breathing. Soft rubber mask gives air-tight fit!

SAMPLE sent for $2.25

H. S. COVER, 68 Chippewa St., South Bend, Ind.

BOYER

Headquarters for
"DEPENDABLE"
FIRE APPARATUS and FIRE DEPARTMENT SUPPLIES

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FORTIFY FOR FIRE FIGHTING

★

BOYER FIRE APPARATUS CO.
LOGANSPORT INDIANA

Chief Sullivan Resigns

Joseph N. Sullivan, Fire Chief and Commissioner of Public Safety of Utica, N. Y., resigned as Chief on July 31. He will retain his office as Commissioner of Public Safety until December 31, when he will retire on half-pay pension on the basis of thirty-five years in service.

Chief J. N. Sullivan

Following in the footsteps of his father, who served twenty years as fire chief in Utica, Chief Sullivan became a fireman in 1907. He was promoted to lieutenant on December 15, 1913; to captain on December 8, 1917; to deputy chief on March 3, 1922, and to chief on March 13, 1925.

He was given the post of public safety commissioner on January 1, 1938. He has filled that position eleven and a half months a year on leave from the Fire Bureau. He has been returning to the Fire Bureau the last two weeks of each year to retain his rights as fire chief. Under his regime the Police Bureau was reorganized and the police pension fund put into the state retirement system.

Chief Sullivan has accepted a job as foreman of Platoon 1 of the Rhoads General Hospital Fire Department in Utica.

Leo B. Barry will serve as Chief of the Utica Fire Department until a civil service examination is held.

Squad Companies to Be Used in New York City

The New York Fire Department has gone in for Squad Wagons for the purpose of having adequate manpower on first alarm responses. The first of five proposed Squad Companies in the high hazard sections of Manhattan and Brooklyn, went into service on November 1 in the heart of midtown Manhattan. It is located in Truck 24 at 33rd and 6th and is manned by one Lieutenant and eight Firemen. The New York department is 700 officers and men shy of its budgetary quota of 1,667 officers and 9,184 men.

The new company rolls to 140 first alarm boxes between Madison Square and Columbus Circle; to 146 second alarm boxes within the same limits, excepting that the second alarm territory spreads east and west to both waterfronts, and to 139 special building boxes in the hotel, shopping, theatre and industrial sections. The apparatus is a converted Seagrave hosewagon on pneumatic tires and is without hose, nozzles and scaling ladders. It has a deck pipe. Benches for the men are in each hose compartment. One-way radio receiver of N.Y.F.D. station WNYF (1630 kc) is on the dash board. Commissioner Walsh is confident that the Squad Wagon principle will help solve the manpower situation and will preclude the necessity of many second alarms.

The personnel of three Lieutenants and thirty men was obtained from twenty-eight companies. The members of this new company are relieved from all forms of extraneous duty and details, excepting housewatch in Truck 24. The company shall not be used for overhauling, nor unnecessarily detained at fires. The company can be special called with "9-Box-21." It's official number is Squad 21, or No. 1 in the 20 series which is reserved for Squad Companies.

New York Fire Department has about 650 officers and men on military leave. There are 100 temporary firemen employed to help fill military vacancies. Applications for retirement are so numerous that the exodus had to be staggered at the rate of 25 a month. Hundreds of officers and men who applied for retirement last summer will not be pensioned until next Spring. There is a feeling abroad in the department that the Squad Wagon has come to stay, and that it will eventually spell the elimination of some of the more closely contiguous fire stations of the horse age, now so well covered by much faster motor equipment.

JERRY DALY.

Nation's Fire Losses Pass $300,000,000 Mark

Fire losses in the United States during the first ten months of the year amounted to $300,872,000, an increase of $46,636,000 over the total for the first ten months of 1942, it was announced recently by W. E. Mallalieu, General Manager of the National Board of Fire Underwriters. The losses for the first ten months of 1943 were only slightly below the total of $314,849,000 reported for the entire year 1942.

Mr. Mallalieu said that estimated losses for October this year were $29,661,000, an increase of $7,040,000, or thirty-one per cent over those reported for October, 1942. These figures are based upon incurred losses reported by members of the National Board, plus an allowance for unreported and uninsured losses. The October losses were $3,173,000 or twelve per cent higher than losses of $26,488,000 reported in September.

S. Bowles King of Underwriters' Laboratories Dies

Samuel Bowles King, Assistant Secretary of Underwriters' Laboratories, Inc., died on October 25 at his home in Winnetka, Ill., after an illness of several months.

Mr. King was in charge of the publication of Research Bulletins and the Data Card Service of the Laboratories.

He joined the staff of Underwriters' Laboratories in 1936 and was appointed Assistant Secretary in 1937.

Chief O'Hearn Retired and Voted Back for Duration

Chief John W. O'Hearn, of the Watertown, Mass., Fire Department was retired on October 1 and promptly voted back into the job for the duration. He was the first permanent chief engineer of the Fire Department, having been appointed in 1912. When he took office,

Chief John W. O'Hearn

he presided over one steam fire engine, two hose wagons, horse-drawn, and one horse-drawn ladder truck. Now he proudly counts eleven major pieces of equipment, including four motor pumps, two city service ladder trucks and a wagon for first aid and emergency lighting.

At that time Watertown had thirty-eight fire boxes; now it has 105. There was a decrease last year of 109 fire alarms over 1941 and fire losses are less now than they were thirty years ago, inspite of a seven-fold increase in the number of alarms.

Chief O'Hearn is Secretary-Treasurer of the New England Association of Fire Chiefs, which he helped to organize twenty-one years ago, and a member of the International Association of Fire Chiefs and the Middlesex County Fire Wardens Association, of which he was the first president.

Fire Chief M. Joseph Cleary Honored

Fire Chief M. Joseph Cleary, who has served the Groton, Mass., Fire Department for fifty years, was recently honored at a dinner and reception.

The master of ceremonies in speaking about Mr. Cleary, gave a resume of the Groton Fire Department and the part Chief Cleary had in it. The Groton Fire Department was organized in 1875 into two companies, the Paugus and the Lawrence. In 1886 the Squanocook Company of West Groton was organized. In May, 1893, Mr. Cleary joined the Paugus Volunteer Engine Company. In April, 1895, he became assistant foreman. In May, 1898, the two companies disbanded and reorganized as Groton Engine and Hose Company No. 1. In April, 1904, Mr. Cleary became first assistant foreman and in 1907 was made foreman. In 1911 the Board of Selectment appointed him an engineer, and in 1921 he became chief.

SEASON'S GREETINGS
for a
Merry Christmas
and a
Happy New Year

This holiday season gives us once more an opportunity to extend our best wishes and warmest greetings to our many friends in the fire service.

We have come through a trying twelve months but the brightening outlook leads us to hope for a bigger and better post war era, when we can pass on to you, our friends, the benefit of the experience gained through our contribution to the war effort. With this hope in our hearts let us go forward in 1944 with the determination to make this year not only a prosperous one but one of achievement.

SAMUEL EASTMAN COMPANY, Inc.
CONCORD, N. H.

Barton Front Mounted
AMERICAN-MARSH PUMPS
Barton-American Midship

FIRE APPARATUS CENTRIFUGAL PUMPS

DUPLEX, TWO-STAGE MIDSHIP MOUNTED

Patented

High Pressure performance entirely unaffected when unit used to pump gritty water.

•

Impellers mounted on individual shafts—breakdown of one pump still leaves one for service.

•

250 pounds pressure at engine speed equal to 30 M.P.H.—not possible with conventional two-stage pumps.

Other Types with Capacities to 750 G.P.M.

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WRITE FOR BULLETIN 8731F

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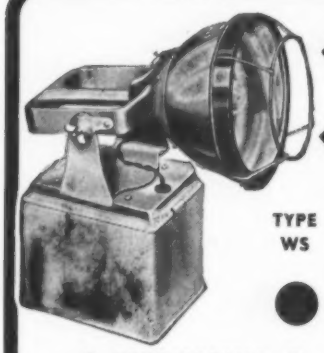
AMERICAN-MARSH PUMPS, INC., Battle Creek, Michigan
Pumps — and pumps only — since 1873

One of 70



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● RECHARGEABLE ●
● LIGHTEST IN WEIGHT—7½ OZ.
● MOST POWERFUL—MILE RANGE
● LONGEST BURNING HOURS
● ALL NIGHT WORK LIGHT OR
● 150,000 C. P. SEARCHLIGHT BEAM
● SLIP SPARE BATTERY IN PLACE IN 20 SECONDS

FOR A QUARTER OF A CENTURY—A MASTER-LIGHT FOR EVERY NEED

CARPENTER MFG. CO.
"Master ★ Light ★ Makers"
200 Sidney St.
Cambridge, Mass.

Chief Rumsey to Instruct Fire Training Courses

Edward C. Rumsey, for twenty-seven years chief of apparatus and high pressure water system in Detroit, Mich., has been appointed instructor in the use of

Edward C. Rumsey

fire equipment and apparatus and discussion leader in fire training conference. He is employed in cooperation with the Extension Service of the University of Michigan through the State Board of Control for Vocational Education.

Chief Rumsey's job as instructor entails setting up instructional training courses in the larger fire departments, holding educational conferences on fire problems, and offering his services as a consultant on particular problems in the community. He will do this on an itinerant program, starting with twenty cities. His services will also be utilized in connection with the fire college and firemen's training conference.

USE Shuredry SALVAGE COVERS

Control loss from water damage

Never before have people been so conscious of the importance of adequate equipment for fighting fire.

With Shuredry Salvage Covers and thorough drill in their use as covers and catchalls you can improve your department's record. Light and easy to handle—they do not freeze even at very low temperatures. Shuredry salvages will not crack when folded for storage.

Write for information and prices.

Fulton Bag & Cotton Mills
Manufacturers since 1870
Atlanta St. Louis Dallas Minneapolis
New York New Orleans Kansas City, Kan.

MANHATTAN FIRE HOSE

FLAT FOLDING
—easier to handle
PRESSURE TESTED
—every length tested under *high pressure*

Also made
RADIO-ACTIVE TREATED
Mildew-Proof • Rot-Proof
Freeze-Proof
Look for the green color

KEEP AHEAD WITH MANHATTAN

THE MANHATTAN RUBBER MFG. DIVISION
of Raybestos-Manhattan, Inc.
Executive Offices and Factories . . . Passaic, N. J.

THE BOOK SHELF

THE SCIENCE OF FIGHTING FIRE, by John J. McCarthy, Assistant Chief of Department in Command, New York Fire Department. Published by W. W. Norton and Company, Inc., New York City. Includes 266 pages with illustrations. Price, $2.75.

In the words of the author this work is for the citizen, the professional, the volunteer and the auxiliary firemen. Its purpose is to assist the citizen to a better understanding of the menace of fire and of the work of the fire fighting profession. It is based on the premise that devastating fires can be prevented by intelligent forethought and the elimination of causes and that those that do occur, in spite of every precaution taken, can be minimized by the use of trained personnel, proper equipment, and the application of definite principles.

Chief McCarthy discusses in some detail what fire is, fire prevention and inspection, auxiliary fire fighting appliances, fire department organization, training, equipment, the strategy of fire fighting and its application, city fires, rural fire prevention and fire fighting, mutual aid, arson and sabotage, wartime fire defense planning, aerial bombs and the subject of hydraulics.

Pardon Please!

IN our advertisement on page 683 of the November issue of FIRE ENGINEERING the list of E & J users in Denver should have given the Denver Ordnance Plant instead of the Rocky Mountain Arsenal.

This was a clerical inadvertence which we are glad to take this means to correct.

E & J MFG. CO.
GLENDALE, CALIF.

CONSERVATION FACTS
on how to save your hose

Fact No. 12

CHECK HOSE FOR INJURIES AFTER EACH FIRE

Each piece of hose should be stamped on the coupling with figures indicating the date the length went into service and an individual number for each length. A chart should be kept by each company on which each length of hose is listed by number. Periodically, if possible after each fire, when cleaning hose for drying and storage, each length should be checked and all injuries and damages entered on the chart against each length number. In this manner weakened or aging hose can be spotted quickly and either removed from service or redistributed to areas where less pressures are needed.

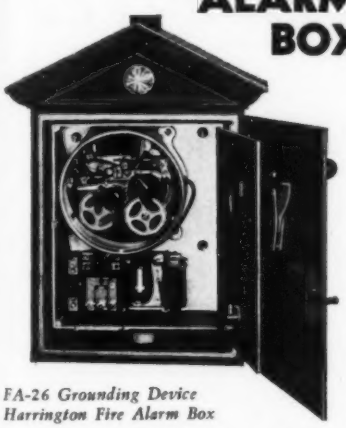
More than 27 million people in hundreds of towns and cities throughout America are protected by Goodall Fire Hose. Miles of Goodall Hose helped England fight the Nazi air blitz. Hundreds of miles of Goodall Hose are now being made for our Civilian Defense.

We are looking for some live-wire distributers in certain territories. Write to our main office, giving a full description of your set-up.

Write for Catalog Folder

GOODALL
RUBBER COMPANY INCORPORATED
6 SOUTH 36TH STREET, PHILADELPHIA
Branch Stocks in Key Cities Across the Country

THE FA-26 FIRE ALARM BOX



FA-26 Grounding Device Harrington Fire Alarm Box

Chief, here is a solution to one of your post-war problems. A modern, light weight, easily installed, sixteen round succession, non-interfering and automatically grounded fire alarm box.

Write for further data.

HARRINGTON SIGNAL COMPANY
Moline Illinois

The Watch Desk

(*Continued from page 767*)

truck and queried: **"where's the fire?"** Imagine his shock when the driver said, **"It's your place of business!" "Well," come back McDowell, "whatenell are we waiting on!"**

The fire was in a small building in the rear of fireman McDowell's dry cleaning and pressing establishment. Yeah, the lads saved the building and the business.

* * *

Hot Off the Tape

It's the season for forest fires. Already Michigan's upper peninsular, ports of Wyoming, and other areas have been swept by disastrous fires. In the Michigan conflagration conservation officials described it as the worst Northern Michigan had had since 1936. . . . Dock Zeigler, Frederick (Md.) "investigated" contents of his auto's gasoline tank, with a kerosene lantern nearby; they buried him on a Sunday. . . . **An estimated 345,000 dwellings, exclusive of apartments and rooming houses, were attacked by fire in 1941, according to State fire marshal's reports.** . . . During the meetings of the Pennsylvania State Brothers in Scranton two false fire alarms were turned in. . . . A fire which swept through the elevator and feed storage warehouse of George Schalick & Sons Company, at Centerton, in Salem County (N.J.) resulted in death of two firemen Royal Rainear and Harold Jackson both of Bridgeton. A third assistant chief Robert Mulford narrowly escaped. . . . In Wilkes-Barre (Pa.) two men and three boys were burned when a gasoline container exploded in home of one of the men who was "doing repair work on it." . . . According to Ripley a water tank 30 feet high and full of water burned down during a rainstorm in Yorktown (Va.) — nothing so remarkable about that! . . . Now if the water from the tank had extinguished the fire! . . . Over'n Baileys Cross Roads, (Va.) the volunteer department raises funds for its treasury by holding an annual horse show. . . . **Speaking of Virginia, has anybody seen the red chariot of Chief Jimmy Duncan of Alexandria? Some miscreant (that's a too polite word for him) up and swiped the chief's nice new car, loaded with special radio and other equipment, leaving an old jalopy in its place.** . . . We're glad to know that Lieut. Jim Hooey, Truck 2, N.Y.F.D., whose life was despaired of after he was dragged out of a fire, has recovered. Incidentally, his truck house will hafta be a garage for awhile as they are going to sell the building. . . . Three persons were killed in Fairfield (Ia.) as result of fire resulting from home canning operation. . . . Three firemen were injured and five downtown buildings damaged by fire in Charleston (S.C.) . . . Four firemen, one a captain, members of the Atlanta (Ga.) fire department were injured while fighting a residence fire in that city. . . . Four members of a Drayton (S.C.) family were burned to death and a fifth seriously injured when their car sideswiped a truck, overturned and caught fire . . . a fireman of the Miami (Fla.) department broke his foot while fighting a two-alarm fire in lot of old automobile tires. . . . John Mov, 50, volunteer member of the Mauch Chunk (Pa.) fire department was killed

QUICK

The First **FIRST-AID IN THE TREATMENT OF BURNS**

The quicker a burn is treated after occurrence, the less probability of blister formation and complications. Remember, the first five minutes are often the most important in the surface treatment of burns. That's why Gebauer's Tannic Spray should be conveniently available at all times. A stable, antiseptic tannic acid solution, ready for instant use. Simply "press the lever" on the dispenseal bottle and direct cooling, soothing spray over burns. Evaporate rapidly, leaving protective tannic film. Available wherever first aid materials are sold. Write for literature.

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TANNIC SPRAY

Our armed forces in this global war know the value of Fyr-Fyter protection. On the home front fire departments rely on Fyr-Fyter protection to save priceless lives and property. War plants now more than ever must have the best fire protection at their fingertips for instant use.

Stop taking chances. If you need essential equipment, write us today. We are prepared to advise and serve fire departments and war production plants immediately. Get the facts regarding Fyr-Fyter equipment for your protection. Write today.

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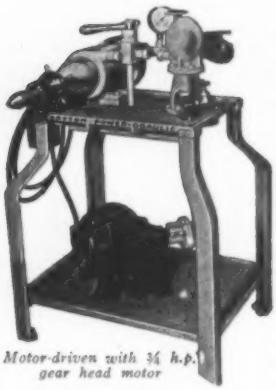
In Line with
NATIONAL DEFENSE
DAYTON POWERDRAULIC



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Expands couplings from ¾" to 6" size.

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Extra attachment removes old expansion rings from old couplings. No manual effort needed.

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THE *New* WHEAT
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2500 FOOT BEAM
25000 CANDLE POWER
1000 HOURS OPERATION

Critical Materials Reduced to a Minimum to insure Availability

FEATURES
★ Positive "non-spill" Construction
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★ Weighs only 92 ozs. complete
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WRITE FOR COMPLETE DETAILS
KOEHLER MANUFACTURING COMPANY, INC.
MARLBORO, MASSACHUSETTS, U.S.A.

when he fell through three floors of a burning building. . . . Four elderly persons were burned to death in two story wooden apartment house in San Jose (Calif.) . . . When a gasoline truck collided with a Georgia & Florida train at a grade crossing near Douglas (Ga.) driver was burned to death, two freight cars were destroyed, and other property menaced. . . . New York City Courts ruled that the referendum for voting on an increase in pay to bring firemen and policemen salaries in line with cost of living could not be left on the ballot. . . . **Fire losses increase! September 1943 losses were $26,488,000, 29 per cent higher than for September, 1942.** . . . Firemen of Baltimore (Md.) fought a tough 6-alarm blaze in downtown section. Four of the Brothers were slightly injured. . . . In two cases recorded the same day, in Washington (D.C.) papers prompt action of children saved the lives of other youngsters. In one, when their mother left nine-year-old Moran Tanner alone with his two-year-old brother, the older tried to light a fire in a stove. The house caught fire. Moran rushed outside, then not finding his little brother, returned to the house and found him under a chair, from whence he rescued him. The entire house was destroyed. In the other case, Eleanor Snyder, 8, also of Washington (D.C.), wore a Hallowe'en costume, which caught fire from a jack-o-lantern. Kathleen Snyder, 6, snatched up a pail of water and doused her sister. The latter's burns were so serious she was put on the hospital critical list. . . When Downey's Hotel, Forrest City (Ark.) burned, seven were killed, others injured. . . . Citizens of the Fort Davis area of Southeast Washington (D.C.) claim fire-fighting facilities "totally inadequate". . . . Joseph Gindele, acting battalion chief, Philadelphia fire department, was injured when his car collided with a truck while he was en route to a fire. They don't use sirens in the Quaker City. . . . Thanks, Pvt. Howard Geesler, Camp Butner (N.C.) for the several news items. They'll be used. . . . The papers say that out'n Seattle (Wash.) the Brothers of Eng. 11 are grateful to the Fremont District Truck unit. Seems the roof of Station 11 was afire, and the hosemen lacked a ladder long enough to go to work on it until the truckmen arrived . . .

"This is the kind of mischief which might easily lead to serious injury for many," frowned Police Judge Dallas M. Potts, Wichita (Kans.) as he imposed 90-day suspended sentence on a 17-year-old youth who had confessed to shouting "Fire" in a crowded theatre so he could get a seat. Why suspend the sentence, we ask? . . . L. E. Ingraham got his morning shave the hard way. Attempting to weld the leaks in a truck's gasoline tank he set fire to it and there was an explosion. The blast singed the whiskers from his face and set fire to the porch! From Okmulgee (Okla.) comes report about Chief Frank Beals who slid the pole jumped on the truck, smelled smoke, and found himself afire. Matches in his pocket had ignited as he rode the pole.

Chief David Hatt Retiring

Fire Chief David E. Hatt is winding up his fire fighting career in the Lorain, Ohio, Fire Department after thirty-two years of service. He joined the department in 1911.

QUAKER FIRE HOSE

Chemical Hose
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Suction Hose
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WANTED
IDLE FIRE FIGHTING EQUIPMENT

Today — right now — there are many American communities and municipalities which sorely need additional fire fighting facilities to give their citizens adequate fire protection and are unable to secure these because of war conditions.

Search your own department or fire stations for any surplus apparatus or old usable equipment and offer it for sale through the classified "Opportunities" columns of this magazine. Rates are low—only $5 per inch.

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AND BEST WISHES FOR THE COMING YEAR

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Manufacturers of the COLT Nozzle and Fire Department Brass Goods for 30 Years

Colt Nozzles Are Doing Their Part In This War Effort

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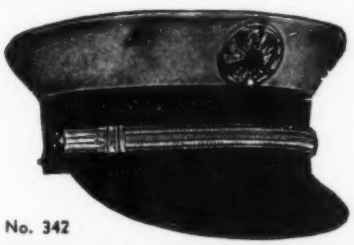
FIREMAN'S UNIFORM CAPS

UNION MADE PROMPT DELIVERY



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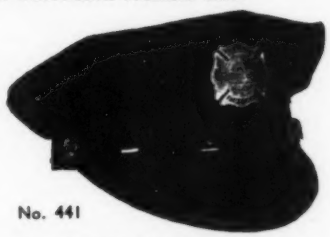
Wentworth Fireman Caps are made of the Highest Quality Standard Materials available and by the Best Skilled Union Craftsmen in all the New and Standard styles. Our 47 years of experience and skilled workmen guarantee you AMERICA'S GREATEST CAP VALUE in all WENTWORTH FIREMAN CAPS.



No. 441

Write direct for latest circular and prices or see your local dealer.

WENTWORTH-FORMAN CO., INC.
578b Washington St., Boston, Mass.

Manufacturers

Fireman Cap Specialists for Over 47 Years

The Round Table

(*Continued from page 771*)

making inspections and learning their respective districts, there would be an increase in efficiency.

It is a true fact that private industry would benefit to a certain extent by the employment of members, especially by those with previous experience in some particular line of work.

One disadvantage, as far as the fire department is concerned, is that the members would not be available for an emergency call. With new men, it would be more than necessary to call in the off-shift in such cases.

Men working in outside jobs should not be entitled to pension benefits. Some pension fund by-laws support this claim.

Leo J. Urbanski, Chief, Saint Joseph, Mo.: I do not believe firemen should be permitted to work at private employment in defense industries when off duty.

After working a full shift at a defense plant, they are fatigued and therefore are not in a physical condition to perform the arduous duties of a fire fighter.

They definitely should not be entitled to any benefits from the pension funds if injured while performing any duties in a defense plant. If they are employed in such a plant, they will have deductions taken from their salaries to protect them under the Social Security set-up.

Ray Tiller, Chief, Waterloo, Ia.: I do not believe firemen should be permitted to work in defense plants during their off-hours.

Our firemen are covered by the pension system and if they were to be disabled in outside employment, it could develop into an unfair hardship on the local taxpayers as in many cases the city would have to place the men upon a pension. Furthermore, I believe that if men were allowed to work at outside jobs they would eventually lose interest in the fire department other than pay day and their off-time.

I further believe that the fire department is important enough and the job large enough that every member should devote his full time and energy to it. If men were allowed to work at other jobs it would be very difficult to secure better working conditions and more pay. In my opinion the City Council would take advantage of the fact that the men were only part-time employees.

In the State of Iowa the pension comes under provision of the State Law, and it does not make any difference what opinion anyone has as to whether men should be entitled to full fire department pension rights.

Terence Mulligan, Chief, Sacramento, Cal.: I believe firemen should be permitted to take defense jobs during their off-hours.

The benefit of men working off-time in defense plants is that they help shorten the war. The disadvantage of their so doing is the possibility of their being hurt in other work.

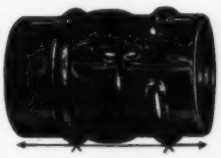
They should not be entitled to pension rights if injured unless they have enough years in the fire department to grant them a service pension.

DOUBLE SERVICE *with* BI-LATERAL

This installation shows the position of the rubber lining in BI-LATERAL FIRE HOSE when held in a flattened position between calls into service. This is why we can save a city one replacement, because this hose will give double service of any hose constructed under the old method.

Also we can load 25% more on the apparatus bed actually making an $8,000 truck loaded with Bi-Lateral construction, cheaper than a $7,000 one loaded with other construction.

Here's the new DROP-FORGED rocker lug coupling (not cast bronze) with the swivel protecting feature.



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PREPARE — PROTECT

Portable equipment is the watchword of today.

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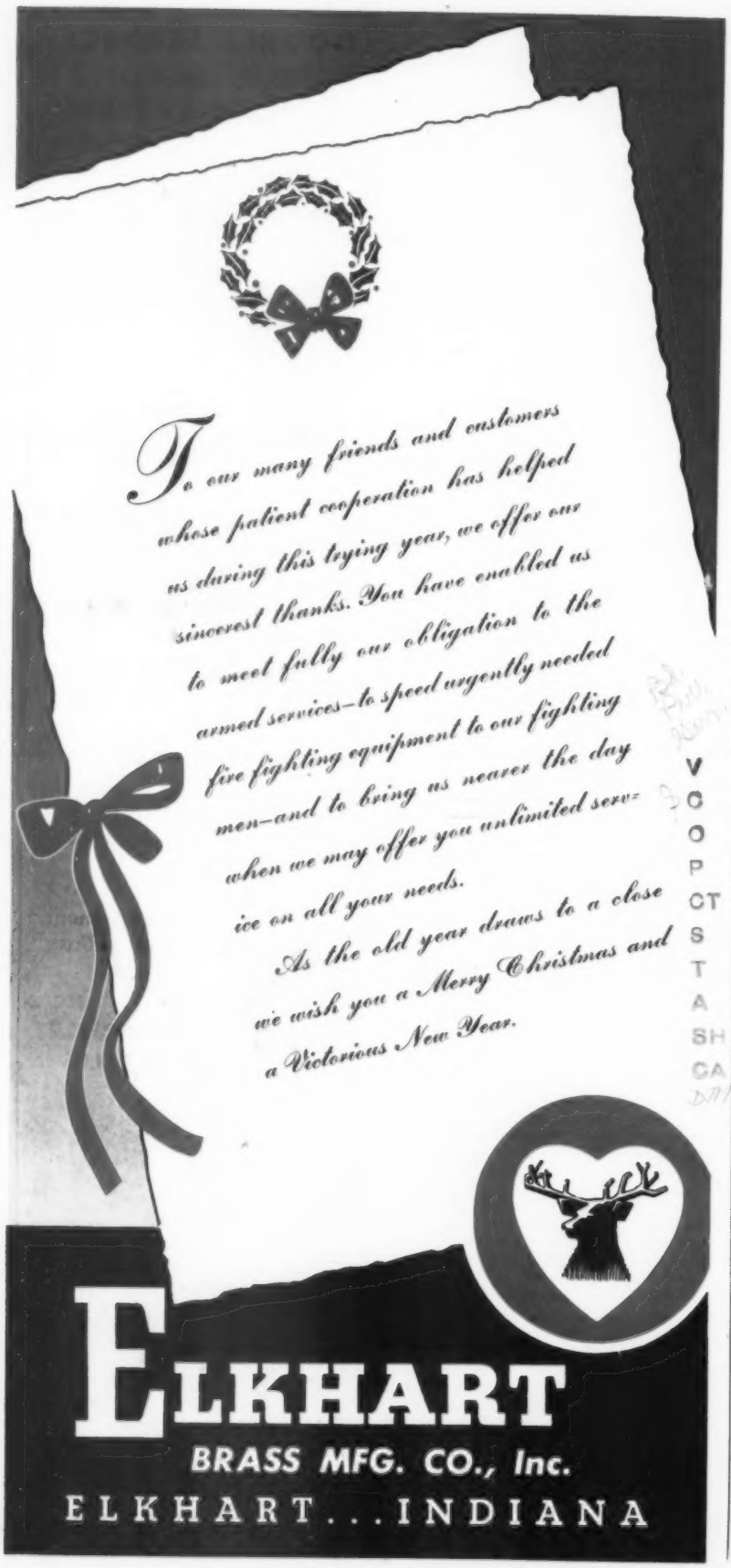
To our many friends and customers
whose patient cooperation has helped
us during this trying year, we offer our
sincerest thanks. You have enabled us
to meet fully our obligation to the
armed services—to speed urgently needed
fire fighting equipment to our fighting
men—and to bring us nearer the day
when we may offer you unlimited serv-
ice on all your needs.
As the old year draws to a close
we wish you a Merry Christmas and
a Victorious New Year.
ELKHART
BRASS MFG. CO., Inc.
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ADVERTISING INDEX

FIRE ENGINEERING

DECEMBER, 1943

	Page
Acme Protection Equipment Co., Inc.	746
Akron Brass Mfg. Co., Inc.	751
American Car & Foundry Co. Hall-Scott Div.	750
American La-France-Foamite Corp.	747
American Marsh Pumps, Inc.	787
American Rubber Mfg. Co.	780
Anderson Fire-Fighting Co., Inc.	744
Atlas Safety Equipment Co., Inc.	775
Bean Mfg. Co. Division, John, Food Machinery Corp.	743
Bi-Lateral Fire Hose Co.	791
Boyer Fire Apparatus Co.	786
Braxmar Co., Inc., C. G.	785
Carpenter Mfg. Co.	788
Circul-Air Corp.	769
Cover, H. S.	786
Dayton Fire Equipment Co.	790
Duo-Safety Ladder Corp.	739
E & J Mfg. Co.	741-788
Eastman Company, Inc., Samuel	787
Eddy Valve Co.	784
Elkhart Brass Mfg. Co.	792
Emerson Co., J. H.	Inside Front Cover
Excelsior Brass Mfg. Co.	791
Federal Electric Co.	737
Fog Nozzle Co.	Back Cover
Four Wheel Drive Auto Co.	Inside Back Cover
Fulton Bag & Cotton Mills	788
Fyr-Fyter Co.	789
Gamewell Company	752
Gebauer Chemical Co.	789
Goodall Rubber Co.	789
Hale Fire Pump Co.	780
Hall-Scott Motor Car Co.	750
Harrington Signal Co.	789
Horni Signal Manufacturing Corp.	764-765
Hudson American Corp.	748
Koehler Mfg. Co.	790
Lightningpak	785
M. & H. Valve & Fittings Co.	778
McIntire Brass Works, E. N.	791
Mack Mfg. Corp.	745
Manhattan Rubber Mfg. Div. of Raybestos-Manhattan, Inc.	788
Midwestern Mfg. Co.	770
Mine Safety Appliances Co.	783
National Foam System, Inc.	773
Oren Fire Apparatus Div. of Roanoke Welding & Equipment Co., Inc.	749
Quaker Rubber Corp.	790
RCA Victor Division of Radio Corp. of America	777
Seagrave Corp.	742
Sireno Co.	784
Smith & Co., D. B.	781
Smith & Son, A., Inc.	784
Sterling Siren Fire Alarm Co., Inc.	782
Ward LaFrance Truck Corp.	740
Waterous Company	779
Wentworth-Forman Co., Inc.	791
Wooster Brass Co.	782

NEERING
G
Page
. 746
751
750
747
787
780
744
775
743
791
786
785
788
769
786
790
739
788
787
784
792
ver
791
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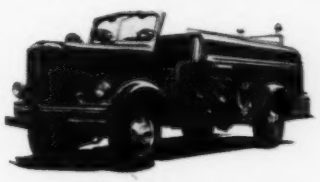
for Action ON THE FIRE FRONT

FWD Fire Apparatus Has The Tested Reserves That Count in Fire Fighting

Whatever the emergency calls for, the reserves are there with four-wheel-drive apparatus—reserve speed to gain precious minutes — reserve power to climb a steep grade — reserve traction to get through snow or mud-blocked streets — reserve safety for fast travel on wet, slippery pavements! The two driving axles of the FWD, delivering powered traction to the front as well as the rear wheels, give you ample reserves of all the factors that count in fire-fighting —speed-power-traction-safety. Cities from coast to coast value the plus performance available in FWD apparatus. FWD builds a complete line of fire-trucks—all types, all sizes—with rotary or centrifugal pumpers in triple or quadruple combinations, aerials, etc. Write for literature.



FWD model KHS, 500 gallon pumper recently purchased by the City of Anchorage, Alaska.

THE FOUR WHEEL DRIVE AUTO CO., Clintonville, Wis.

***Canadian Factory:* KITCHENER, ONT.**

One of a fleet of FWD 85-foot aerial ladder trucks in service for the City of New York undergoing test by the Fire Department engineers. The aerial ladders on these trucks are of anti-gravity design and are raised by spring hoists. Less than 20 seconds are required to raise the ladder to a vertical position and extend it to its fullest height. The special FWD tractor developed for this service provides for quick acceleration, high sustained speeds and extra safety in steering control.

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FOUR-WHEEL-DRIVE **FIRE APPARATUS**

• Built by the Oldest and Original Exclusive Builders of Four-Wheel-Drive Trucks.

THE FEAR OF FIRE is dispelled with the use of FOGNOZL

Fognozls produce a protecting screen of fine particles of water, called "water fog." This screen, whether produced from a high velocity tip or a low velocity head, protects the fireman so that he can advance on the fire with confidence.

Harry T. Paxton has written a very instructive article under the title of "Firemen of the High Seas" appearing in the Saturday Evening Post of October 9, 1943, in which he says: "The old fashioned solid stream of water, while good for putting out burning rugs, mattresses and other common combustibles, is not nearly so effective for more ticklish work as are some newer wrinkles. One of these is water fog."

Then again he says, "With this fog as a shield, they (firemen) can advance right up to a tank in which gasoline is blazing so intensely that spectators forty or fifty feet off turn their faces away. It works against the real thing, too; in the tanker blaze described earlier, fire fighters were amply protected by their screens of water fog, and got along without such paraphernalia as asbestos suits. Properly applied, the fog quenches flames in a matter of seconds."

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- ECONOMY & AVAILABLE SUPPLY
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A prize is hereby offered for the best "still" photographs showing the sequences of extinguishing fires occurring in the United States and Canada, with any of our FOGNOZLS, old style or new. The photographs in this advertisement are a sample. We reserve the right to use any or all photographs for advertising purposes and any sent in are sent to us with this understanding. The only compensation is the prize to the best pictures. The prize? Why a FOGNOZL, of course.

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